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TABLE OF CONTENTS

PAGE

A Survey of the Mental Hygiene Needs of 250 School Children. By Elinor S. Noetzel and Harold M. Hildredth, Ph. D. 525

Race and Mental Disease in New York State. By Benjamin Malzberg, Ph. D. 538

Physiotherapy and Hydrotherapy as Important Adjuncts in the Treatment of Mental Disease. By Albert S. Palombo, M. D. 570

Basal Metabolism in Manic-Depressive Psychoses. By Lewis R. Wolberg, M. D. 586

The Paroled Father in the Mother's Allowance Family. By Frederick Rosenheim, M. D. 610

A Psychic Defense Against Disagreeable Reality. By Pompeo Milici, M. D. 617

Treatment of General Paresis with Combined Electropyrexia and Tryparsamide. By Leland E. Hinsie, M. D., and Joseph R. Blalock, M. D. 631

Treatment of General Paresis—Comparative Results. By H. L. Levin, M. D. 636

Report of Cases of General Paresis Treated by Modern Methods. By Ernest Kusch, M. D. 642

Modified Sedation with Secondary Butyl-Ethyl Barbituric Acid in the Psychosis. By Anna A. Gronlund, M. D. 651

Books Reviews 654

George Hughes Kirby 671

Notes 672

Index 675

A SURVEY OF THE MENTAL HYGIENE NEEDS OF 250 SCHOOL CHILDREN

A Study in Organizing a Community in Child Guidance

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I. The Problem

In the fall of 1933 the school physician of the Rockwell Union School at Nedrow, a suburb of Syracuse, referred to the child guidance clinic conducted by the director of the Syracuse Psychopathic Hospital, three children because of lack of school progress. These children were found to be of borderline intelligence. Two were brothers who came from a home where constant quarreling between the parents was the rule. The mother had had an early artificial menopause brought on by a hysterectomy which had plunged her into at least a borderline involutional psychosis. The father was a mail carrier and afflicted with that very common American compulsion neurosis, that for want of a better name might be called "installmentitis". The piano, the radio, the car and the electric washer sat in state in the disordered home. The collectors ran a race to the front door on pay day. The one who got there first got most of the pay check and the mother promised, cajoled and blustered at the others. Money was scarce for food and the mother had little disposition to cook, so the children were largely subsisting on milk and rolls supplemented by lollypops from the pennies that mother gave them occasionally to buy a moment's peace from their noise for her tortured nerves. The other child was under as grave emotional stresses as these two.

When our social worker went back to the school to explain to the teachers and principal, it was not hard to convince them that with a gnawing stomach and a mind filled with the parents' quarrels, lack of attention might have some basis other than mental defect. However, they still felt that their school had a serious defect somewhere as they were not securing the results with their teaching that they

hoped for. They proposed to send to the clinic 25 more children who were felt to be problems.

The president of the Parent-Teacher Association had been contacted and had given us her heartiest cooperation from the first. She telephoned us that the parents in the community were not taking kindly to being requested to bring their children to our clinic as some of them had heard of children going to child guidance clinics and being subsequently committed to State schools. It seemed best that the chief social worker of this hospital should speak at the next Parent-Teacher Association meeting and explain the purposes of the clinic. In the discussion that followed the parents brought out their concrete problems and an attempt was made to show them that each problem differed, that no treatment could be recommended except after careful study and that this was the purpose of the clinic. At the close of the meeting three parents asked for appointments for their children.

As we firmly believe that a child is not only a psychobiological unit, but also in the process of becoming a socialized human being, we next made an informal study of our community. We were indebted to the Onondaga Health Association, which had already placed a nutritionist in the school for a survey of the health facilities available. A short time before there had been a large number of people in the community enamored of the road to health via chiropractic manipulation. The physical needs were largely taken care of by local practitioners. There was an already overburdened county nurse. A pre-natal clinic was conducted in the town. If surgery was needed patients were admitted to the local hospitals through the Free Dispensary of the Medical School of Syracuse University.

There was no organized social work in the community. A local welfare officer took care of the relief needs. The Syracuse Children's Bureau was county-wide in its scope. As for group work or organized recreation there was none, but there was plenty of space, air and green trees. The housing was adequate.

The community was largely industrial. A good share of the people in the community were skilled artisans. While they had suffered to the extent of reduced wages and part-time work, few were on relief.

II. Children Seen in Clinic

There were 30 children seen in the clinic, ranging in ages from 6 to 14. Of the children seen all had physical defects, and all of these were remediable. The conditions found were malnutrition, dental caries, hypertrophied tonsils, otitis media, myopia and contact tuberculosis. The problems for which they were referred were inability to progress in school, restlessness, shyness, ocular tic, enuresis, inability to get along with other children, tantrums, marked antagonism to a teacher, and speech defect.

Intellectually the children ranged in intelligent quotients from 72 to 127.

The results of treatment showed 20 children making a satisfactory adjustment, five much improved, two improved; three were closed because of our inability to interest the parents in treatment. Malnutrition was the physical defect most often found and all the children remaining under treatment made satisfactory gains in weight. We were able to obtain through the Parent-Teacher Association one tonsillectomy and glasses; through the county health nurse milk, cod liver oil and other body-building products.

The local churches cooperated in providing Boy Scout activities and other recreational facilities. The following are examples of cases studied:

Robert A., age 11 years 4 months, I. Q., 90, grade 5-1. Referred because he was nervous and restless in the classroom. There was a question of his being graded too high. He blinks rapidly when attempting to concentrate. In the clinic the child was found to be suffering from malnutrition and high myopia and enuresis. This enuresis had been a late development, developing only when the father had become employed away from home. The boy had been much attached to his father, while the youngest child was the mother's favorite. The home situation showed that the family was heavily in debt, the mother nervous from being harrassed by creditors. The child was taking a premature financial burden through his paper route. The mother was pouring all her worries upon him. He had a seriousness in discussing his problems that was in itself pathological. He stated that the thing he liked to do in school was to sit and watch the snowflakes come down. Treatment consisted of

securing glasses for the child through the Parent-Teacher Association, which he promptly broke. They were then replaced through an interested private individual. The mother was allowed to talk out her worries to the social worker and psychiatrist and she no longer felt the need of talking to the child.

The child had some fears but rapport was easily established with him and he talked over his problems with the psychiatrist. He looked forward with great eagerness to his clinic appointments, telling his mother "I like to talk to Dr. S. He understands a fellow," probably showing the child's intense need for a father surrogate.

Visits were made to the school and the teacher's aid enlisted to draw him into activities with other children. In the meantime the necessity of having the family together was talked over with the mother. The father fortunately secured work close to the family and returned home. He interested himself in being somewhat of a companion to the child and also encouraged him to have more outside activities. The child was encouraged to give up his paper route because of his precocious sense of responsibility. The aid of a minister in his church was enlisted and the boy became quite an enthusiastic Boy Scout. At present he is getting along well in school. The tic has disappeared and he enters well into activities.

Edith D., age 7 years 7 months, I. Q. 77. Psychologist commented that it was probably higher. Her problem as referred by the school was that she did poor work, was restless, a "wiggler." Problem as seen by the clinic was marked malnutrition, anemia, family income inadequate, the mother shy and nervous and much burdened with the financial situation. At first the mother and father did not regard the child's physical condition as anything serious as all members of the family had been "skinny." It was felt that this child's physical setup was in a great measure responsible for her restlessness. The family had refused to apply for relief and were supported by the odd jobs that both the mother and father secured. Finally the consent of the family was obtained to work out with the town welfare officer a plan whereby and whenever the father was out of work he would be placed on a county relief project. There was an extra allowance granted for the child's food. Through the county health nurse cod liver oil and milk were provided. The

child was explained to the teacher, who made a special effort to draw her into group activities without calling attention to her scholastic deficiency. The teacher herself said she had never realized before that the child simply could not sit still.

In this case very little psychotherapy was used. At the end of the year the girl was retested, having an I. Q. of 85. She had made a gain in weight. She was decidedly more alert and improved in school and was making friends and playing with other children. She herself said that before she came to clinic she had been too tired to play with the other children. We felt that the child's difficulty was due largely to her physical condition in which she did not have sufficient strength to put forth an effort to make contacts.

Mary S., age 11 years 5 months, I. Q. 98, grade 5. Referred because of difficulty with arithmetic and because she was a nail-biter. She was an adopted child. There was no emotional stress in the home, probably a little over-pampered. It was discovered that she had had poor early teaching in arithmetic and this had grown steadily worse with a teacher whem she disliked heartily. The family were reassured as to her intellectual ability. Special coaching was provided for her by the school. She was transferred to another teacher who made a special effort to gain her confidence and within a month there was no more difficulty.

John W., age 6, I. Q. 120, grade 3. Referred because of poor work and inattention in school. In the clinic his physical condition showed malnourishment, dental caries, need of an eye examination. He had been in contact with his mother who was an arrested t. b. The social environment was found to be desirable. No marital disharmony. Clean, well-kept home, good managing of finances. The mother was high-strung, nervous, over-conscientious and needed constant reassurance. The father was a factory worker, earning $15 a week. He left the responsibility largely to the mother. Mother was reassured and encouraged by the psychiatrist, instructed in the care of her own health and arrangements were made for a check-up. The father was seen by the psychiatrist and encouraged to take more responsibility. Cooperation of the teacher was gained in giving the child more practical things to do and keeping him busy. A promotion was arranged as it was found that the school work was

too easy and he was bored. When his work was a little more of a challenge he responded splendidly. A special diet was prescribed and he gained in weight. His school work and behavior improved and he is now mixing better with the other children. Mother is much more rested as the father is helping her in the care of the children and they are planning together for them.

James V., age 8 years 6 months, I. Q. 113, grade 2. Referred because of his inattention and day-dreaming. Poor progress in school. On examination he was found to have anemia, hypertrophied tonsils and malnutrition. On the emotional side he was the oldest child and jealous of his younger siblings. He failed to mix well with other children, made constant bids for his father's attention. The mother knew very little about home making and was a rather infantile person who resented having to share her time and attention with the children. Treatment consisted of arranging a special promotion. Teacher's interest was enlisted, mother was given some instruction in diet and child care and father was encouraged to give the boy more attention. The mother gained considerable insight into her own infantilism and the boy was made to feel more secure in her and the father's affections. He showed considerable improvement in school and in the home although his physical condition has not improved.

III. Nedrow School Survey

At the completion of the study of the 30 children the principal of the school visited the hospital and said she still felt that the underlying problems in her school had not been touched. She did not feel they were getting the results from their teachings that they should and asked for help in diagnosing their teaching difficulties. It was suggested to her that if the school board would cooperate to the extent of purchasing group intelligence and school achievement tests, our psychologist, assisted by students from the psychology department of Syracuse University, would conduct these tests. The test were conducted with the following results:

The 250 children in the Rockwell Union Free School, Nedrow, N. Y., were tested the week of March 12-16, 1934.

Tests used: Intelligence tests used were Dearborn Group Tests of Intelligence, Series I and II. Educational tests used were Pintner Educational Achievement Tests and Pressey Attainment Scales.

VALIDITY AND RELIABILITY OF TESTS

Validity of Tests: On the Dearborn tests the correlation with the Stanford-Binet usually runs around +.80. The difference between the two is largely in the matter of language. The Dearborn test, depending much less on language than the Stanford-Binet, does not penalize the child with linguistic difficulties as does the latter test. Correlation of these two tests on a group of 30 children from the Nedrow school yielded a somewhat higher coefficient. Individual scores, however, also ran somewhat higher. So, while the Dearborn test measured to a considerable extent the same differences and ranked children in the same relative order as the Stanford-Binet, still the Dearborn I. Q.'s ran slightly higher than those of the Stanford-Binet.

The validity of educational tests was not such a problem, for these tests are constructed in accordance with general standards throughout the country.

Reliability of Tests: For the tests used in this study the coefficients of reliability, established in their standardization, are all over .90. Reliability coefficients for the Nedrow group, as established by the split-half method, were over .95.

Hence we were assured that our tests were both reliable and valid to a reasonable degree. This, along with the observed fact that the children were unusually interested and cooperative during the administration of the tests, gave assurance that the results of the tests were dependable and could be relied upon.

FINDINGS

Individual Standards

Children were slightly above normal in intelligence (I. Q. = 105), and in school achievement (E. Q. = 102). They were slightly below in relative accomplishment, i. e., in what might be expected in children of their ability (A. Q. = 97).

School Standards

In educational achievement the school was below standard in every grade but the 7th.

In mental age the school was below standard in every grade but the 7th.

In chronological age the school was below standard in every grade.

Discrepancy and Cause

The grades of this school were, with one exception, about a half year below standard in achievement. Yet individually the children were bright enough and were doing average work for their ages. The teachers and principal of the school were aware in a general way of both these facts and were at a loss to understand the discrepancy.

The reason for it lay in the age and the grading of the children. Most children were too young for the grades they were in. The school was trying to teach standard work for, say, the 5th grade, to children who were below 5th grade age. And being about average children they were mentally as well as chronologically below 5th grade age. It was small wonder the graduates of this school fared badly in the city high school, for they were poorly prepared both in knowledge and mental maturity for high school work.

It seemed surprising that the ages of the children should so consistently run lower than those of city children in the same grade. But this state of affairs was due in good part to the fact that the school had no kindergarten and children were admitted to the first grade at the age of five.

Standard Placement

Due in part to the situation just described, over half the children in the school were placed in the wrong grade. From point of view of actual educational achievement the displacement amounted to 61 per cent, as follows:

51 per cent misplaced by 1 grade
7 per cent misplaced by 2 grades
3 per cent misplaced by 3 grades
44 per cent placed too high
17 per cent placed too low

By mental age displacement was 65 per cent
By chronological age displacement was 70 per cent

Actual Placement

It might be thought that although many children were displaced according to standard placement, still they would be fairly well placed in their actual system which was about ½ year below standard. This was not even the case, however.

The grades showed wide spreads both of ability and achievement. In each grade there was a range of from 2½ *to* 5 *years* in *actual achievement;* and a spread of from 3 *to* 8 *years* in *mental age.*

Obviously this profound displacement militated strongly against effective teaching. The 5th grade teacher had children who were doing only 3rd grade work and some who were doing 7th grade work in the standard subjects. The mental age of her children ranged from 8 *to* 16 *years.*

Relative Accomplishment

As one might suspect from above the superior children were being neglected. The A. Q.,—expressing the extent to which children were using the ability they had—was 104 for retarded children, 101 for normal children and 92 for superior children.

Teaching

In view of the foregoing conditions the fact that the children were doing average work for their age (E. Q. = 102) spoke well for the teachers.

No grade showed significant deficiency in any subject. Also, there was no indication of widespread or consistent defect in any of the standard subjects, which ,if present, would indicate faulty methods of instruction.

Turnover

It was hard to get adequate data on the amount of turnover in the school, but the teachers had gained the impression that it was large. Many children transferred in from other schools and many likewise left each year.

Complete records were available for one past year only, 1931-1932. Children who were in the 2nd to 6th grades that year should have been, roughly, in the 4th to 8th grades at the time of the sur-

vey. Of the 180 children who were in these grades in 1931-1932, only 120 remained; 60 children had left.

In these grades, then, there had been a turnover of 33 1/3 per cent in two years! Although we cannot safely assume this rate to have been constant in the past, yet if it were it would mean a turnover of 100 per cent every six years. This in itself was a strong indication that the community was changing in character—a fact already recognized by the school.

The significance of this change will be discussed later, but one more finding should be noted here. The turnover was uneven in the grades, running from 27 per cent to 41 per cent. This may account in part for the disparity of performance among the grades.

	1931-1932	1934-1934	Turnover, per cent
Grades	2	4	29
	3	5	27
	4	6	39
	5	7	28
	6	8	41

Unevenness of Ability

The distribution of I. Q.'s for the entire school varied considerably from a normal curve. Instead of a bunching of values about the mean, the curve was mildly bimodal. This distribution of intelligence was probably a reflection of the community itself, which is anything but an unselected or random sample.

Atypical distributions were also found within each grade. But these did not resemble each other too closely in their atypical nature, nor in their means. There was, for example, an average difference of 15 points in I. Q. between the 7th and 8th grades. The 7th grade children actually had more ability to do 8th grade work than did the 8th grade children (mean mental age seven months higher).

RECOMMENDATIONS

With only one of eight grades doing standard work, and with a total displacement of over 60 per cent by educational achievement, by mental age and by chronological age, it was apparent that any sufficient remedy must be drastic. The following recommendations were made to the school board.

1. *Relocation of children.* A reorganization of the school on standard lines is a necessary step in correcting the accumulated defects of years. Relocation of the children should be done on the basis of actual school achievement and mental age.

It would be both difficult and unprofitable to put a pupil back more than one year. There are many special subjects which are located in various grades besides the standard subjects. There would be needless repetition of these studies for the child. Likewise it would be unwise to advance a child more than a year for he would miss too much of this accessory training.

However, only 10 per cent of the children are misplaced by more than one year; 50 per cent are misplaced by one year. This method would eliminate the 50 per cent displacement and leave the 10 per cent misplaced by only one year or more.

Relocating children on this basis would mean that about half of the children, in, say the 4th grade, will be in the 4th grade next year. It will be a more advanced 4th grade, however, by about a half year. The other half of the children would go into the 5th grade, but it will be a harder 5th grade, so these children will in effect skip a half grade. There will, of course, be some children who will be on the line. These cases can be placed in either grade and then adjusted the following year by the usual promotions or retardations.

2. *Raising admission age.* Children should be admitted to the first grade no younger than six years, in order to prevent a continuation of the old conditions. A kindergarten or pre-school class would be of help. These children could be kept for differing periods of time so that a fairly uniform group could be admitted each year to the first grade.

3. *Correcting Individual Defects.* Because the situation has continued for some time, a reorganization of the school is not a complete solution. Locating a child properly in the 5th grade now, gives no assurance that he is well grounded in the fundamentals of 3rd grade work. In many of the pupils there will inevitably be weak spots in their past training. These have a persistent tendency to remain troublesome for many years.

Therefore it would seem wise during the coming year to locate an fill up as many of these gaps as possible. Diagnostic tests in the standard subjects will help to reveal these lacumae in individual children. A little extra coaching or the use of drill tests can then be employed to strengthen the weak spots.

4. *Psychiatric problems.* Children of ability who work hard but still do poorly in their studies should be referred to the children's clinic. If an individual psychological examination still shows them of sufficient ability and preparation to do the work, they will in all probability profit from psychiatric examination. Children of this type frequently are beset by physical or emotional disturbances. These are often amenable to treatment, and attention to them may prevent serious future disorders.

5. *Future testing.* Future testing would be advisable on several grounds. The flux of population and the changing character of the community present definite school problems. It is not only the fact that there is a huge turnover in the school. There is also considerable variation in the degree of turnover which each grade is subject to from year to year. In addition to this there is the constant possibility, and present fact, that the levels of various grades may be far apart.

All this presents a complicated problem in placement. As long as the school and community are in a state of considerable flux, an occasional survey would reduce the problems thereby engendered, and help in keeping the grades equalized and standard.

SUMMARY

The children on the whole were somewhat brighter than average, they were doing work up to the average for their age but not quite up to the level of their ability.

The teachers were attempting to give standard work to the children, but the children were not absorbing it, and the grade level of attainment was considerably below standard.

One reason was that the children were too young for the grades and were expected to do standard work without having the standard maturity and development. Another reason was the very bad

placement of children. This reduced the efficiency of the teacher and caused neglect of the superior child. It also had a bearing on behavior problems.

Suggested measures were: 1. Relocation of the children on the basis of achievement and mental age; 2. Raising age of admission to first grade to six years; 3. Use of tests next year to detect and remedy individual defects; 4. Referral of questionable cases to the children's clinic; 5. An occasional school survey or use of placement tests in the future.

This was expected to go far toward molding the school on standard lines and gearing it in the rest of the educational system.

Subsequent reports from the school show that after this regrading there was marked improvement in the results of teaching as evidenced by higher grades on the Regents examinations. The lower grades, which had presented some difficult teaching problems showed considerable progression. The disciplinary problems were also found to be fewer.

We do not feel that the most important benefit derived from the study of the community was a clinical one, but it appeared that the principal benefit was educational, which cannot be measured. This was evidenced by the teachers coming voluntarily for consultant service in the handling of disciplinary and educational problems. The problems of teachers' attitudes have already received extensive attention elsewhere and we feel that it was in this educational field that we were able to make the greatest contribution. We have seen other teachers not in the school, referred to us by the Nedrow teachers. Our own feeling is that there is great necessity for educational work among teachers, nurses and in fact all professional people who deal with children and in truth, in order that children may derive the most benefit, psychiatry must more and more enter into the service of education.

RACE AND MENTAL DISEASE IN NEW YORK STATE

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The prevalence of mental disease in the United States is influenced to a high degree by the relative proportion of the foreign-born stock. The 'crude' rates of the foreign-born are uniformly higher than those of the native-born. Age differences are not sufficient in themselves to account for the variations, though they do furnish a partial explanation. It has been shown, for example, that in New York State during the years 1929 to 1931, the native-born whites had an average annual rate of first admissions to all hospitals for mental disease of 58.7 per 100,000 population, compared with a rate of 115.1 among the foreign-born white population, the latter rate being in excess by 96 per cent. On a comparable age basis, however, the rates were 91.8 and 108.8 for the native and foreign-born populations, respectively, the latter rate being in excess by only 18.5 per cent.[1] Native whites of native parentage have the lowest rates of mental disease and it is interesting to contrast these with rates for all foreign-born whites. The rates are summarized in Table 1.

TABLE 1. AVERAGE ANNUAL RATES OF FIRST ADMISSIONS TO ALL INSTITUTIONS FOR MENTAL DISEASE, 1929-1931, AMONG THE WHITE POPULATION OF NEW YORK STATE, CLASSIFIED ACCORDING TO NATIVITY

Age (years)	Native of native parentage			Foreign-born		
	Males	Females	Total	Males	Females	Total
Under 15	1.7	1.2	1.4	0.8	1.7	1.3
15-24	49.8	31.3	40.5	92.1	58.5	74.1
25-34	71.2	58.5	64.8	96.5	81.7	89.2
35-44	78.0	74.1	76.1	116.8	96.5	107.5
45-54	88.9	76.4	82.7	123.4	97.5	111.5
55-64	115.5	81.7	98.5	142.4	113.8	128.4
65-74	181.5	120.8	150.0	234.2	197.4	215.8
75 and over	281.3	212.7	242.5	456.2	429.0	441.3

Among natives of native parentage the average annual rate of first admissions per 100,000 population grew steadily from a mini-

mum of 1.4 under 15 years of age to a maximum of 242.5 at 75 years and over. Among the foreign-born the rates grew from a minimum of 1.3 to a maximum of 441.3. Disregarding the rates in the youngest age interval (as these are subject to great chance fluctuations) it may be noted that the rate of the foreign-born was in excess of that of the native population in each interval. At 15 to 24 years the foreign-born rate was in excess in the ratio of 1.8 to 1. The ratio decreased to 1.3 to 1 at 45 to 54 years and at 55 to 64 years, but increased thereafter, reaching a ratio of 1.8 to 1 at 75 years and over. The same general trend is apparent among both males and females. On the whole, however, the ratios of the rates of the foreign females to those of the native females were less than the corresponding ratios among males in the intervals under 55 years of age, but greater thereafter.

What is true with respect to all psychoses as a group is also true of the individual psychoses. Omitting consideration of other complicating factors, it may be said that in comparable age intervals the foreign-born have higher rates than the native-born, though the differences are not as great as has sometimes been asserted to be the case. Such results, however, will appear of greater significance, if, instead of treating the foreign-born as a unit, we break up this mass into smaller and homogeneous populations. A rate for all foreign-born is, after all, an average, and does not tell us what characteristics the components may possess. Even on *à priori* grounds it may be suspected that the rates of mental disease vary among the several foreign-born groups, and that, though some of the latter must have higher rates than the native-born, others may have lower rates. In the following study, therefore, we shall consider the incidence of mental disease among five numerically important groups of foreign-born whites in New York State. The data include all first admissions among each of these groups of white foreign-born to all institutions for mental disease in New York State during the fiscal years 1929 to 1931, inclusive.

The analysis of such data will throw some light upon the important subject of race in relation to mental disease. Without entering

into any extended discussion of the thorny question as to what constitutes a race, or whether there are pure races, it will appear clear that the foreign-born populations included in this study appear to possess a degree of homogeneity sufficient to justify our regarding them as units. Furthermore, the differences between certain populations, for example, Scandinavian and Italian, are sufficiently large and obvious to lend utility to such an investigation.

From the viewpoint of racial analysis it would be preferable to study each group in its native environment, as in so doing we would tend to eliminate many environmental stresses which are related to the onset of mental disorders among immigrant populations. Unfortunately, such comparisons are not possible at present, as there is no generally accepted, uniform, international classification of mental diseases, nor are the rates themselves compiled in a uniform manner. Furthermore, rates of first admissions are influenced by the varying social attitudes of different countries with respect to provision of institutional facilities for the treatment of mental disorders, and hence the rates are not strictly comparable. Studying the various immigrant groups in New York State, we avoid these sources of error, since the statistical data are compiled in a uniform manner, and represent no social selection as between one group and another. While, however, it thus appears justifiable to compare these immigrant groups with each other in New York State, we shall refrain from drawing conclusions as to the characteristics of the same populations in their native lands. This is clearly desirable since it is difficult to determine whether under the conditions of emigration which existed prior to 1920, the emigrants to the United States represented a random sample of the populations from whom they were derived. Selective factors were clearly at work, some of which favored the emigration of hardy individuals; other factors may have encouraged a poor selection. There is not available at present a body of data sufficiently sound to enable us to compare our immigrant groups with their non-emigrating co-nationals from the viewpoint of mental disorders. It must be understood, therefore, that the following discussion relates only to the

characteristics of foreign-born populations in the State of New York.

The five groups of foreign-born whites who will constitute the basis for our study are Italians, Germans, Irish, English and Scandinavians (Norway, Sweden and Denmark). These are arranged in the order of their numerical frequency in New York State and the discussion follows in the same order. The analysis of rates of mental disease according to age and race was made possible by use of a bulletin entitled "Age of the Foreign-Born White Population by County of Birth", prepared by Dr. George B. L. Arner and issued by the U. S. Bureau of the Census. We are under further obligation to Dr. Leon E. Truesdell, chief statistician for population of the Bureau of the Census for providing detailed statistics for those under 20 years of age.

Italians

Italians constituted the largest foreign-born group in New York State on April 1, 1930. They totaled 629,322, representing 19.3 per cent of the foreign-born population of the State. In 1900 foreign-born Italians represented only 9.6 per cent of the foreign-born population. Between 1900 and 1910 there was a very marked growth in the size of the Italian population, which represented 17.2 per cent of the foreign-born population in the latter year. In 1920 the corresponding percentage was 19.3, the same as in 1930. The decade 1920-1930 may undoubtedly be regarded as marking the maximum for this group, since, with continued immigration restriction, the Italian-born element is certain to decline both in number and per cent.

During the three years ended June 30, 1931 there were 1,997 first admissions of Italian nativity to all institutions for mental disease in New York State, of whom 1,316, or 65.9 per cent, were males, and 681, or 34.1 per cent, females. The average annual rate of first admissions was 105.8 per 100,000 population; males and females had rates of 123.0 and 83.3, respectively. The rates are shown according to sex and age in Table 2.

TABLE 2. AVERAGE ANNUAL RATES OF FIRST ADMISSIONS TO ALL HOSPITALS FOR MENTAL DISEASES IN NEW YORK STATE, PER 100,000 POPULATION, 1929-1931, AMONG NATIVES OF NATIVE PARENTAGE AND FOREIGN WHITES BORN IN ITALY

Age (years)	Males			Females		
	Natives of native parentage (1)	Born in Italy (2)	Ratio of column (2) to column (1) (3)	Natives of native parentage (1)	Born in Italy (2)	Ratio of column (2) to column (1) (3)
Under 15.....	1.7	....	....	1.2	....	....
15-24	49.8	73.5	1.5	31.3	52.1	1.7
25-34	71.2	96.8	1.4	58.5	80.1	1.4
35-44	78.0	120.2	1.5	74.1	77.5	1.1
45-54	88.9	132.3	1.5	76.4	77.2	1.0
55-64	115.5	132.9	1.2	81.7	74.6	0.9
65-74	181.5	240.9	1.3	120.8	159.0	1.3
75 and over.....	281.3	493.9	1.8	212.7	453.0	2.1

Among Italian males the rates rose from a minimum of 73.5 per 100,000 population at 15 to 24 years to a maximum of 493.9 at 75 years and over. Among females there was a minimum of 52.1 at 15 to 24 years. The rate of 80.1 at 25 to 34 years may be regarded as unduly high, and probably a chance fluctuation. The rates were fairly constant from 35 to 64 years, but increased rapidly thereafter to a maximum of 453.0 at 75 years and over. The male rates were well in excess of those of the females.

Table 2 also affords a comparison of the rates of foreign-born Italians with those of native whites of native parentage. Among males the Italian rates were in excess in each age interval. The excess was a minimum at 55 to 64 years, where the Italian rate bore a ratio of only 1.2 to 1 to that of natives of native parentage. The disparity increased rapidly after 65 years, and reached a maximum at 75 years and over, where the Italian rate was in excess in the ratio of 1.8 to 1. Among females there appears to be a definite trend, the ratio of the Italian rate to that of native white females of native parentage decreasing from 1.7 to 1 at 15 to 24 years to 0.9 to 1 at 55 to 64 years. After 65 years, however, the rates increased much more rapidly among Italian females, until at 75 years and over the Italian rate was in excess in the ratio of 2.1 to 1.

The distribution of the psychoses among the Italian-born first admissions is given in Table 3.

TABLE 3. FIRST ADMISSIONS TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, AMONG THE FOREIGN WHITES BORN IN ITALY

Psychoses	Number of first admissions			Percent of total first admissions			Average annual rate per 100,000 population born in Italy		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Traumatic	14	2	16	1.1	0.3	0.8	1.3	0.2	0.8
Senile	79	77	156	6.0	11.3	7.8	7.4	9.4	8.3
With cerebral arteriosclerosis	155	90	245	11.8	13.2	12.3	14.4	11.0	13.0
General paresis	301	24	325	22.9	3.5	16.3	28.1	2.9	17.2
With cerebral syphilis	22	2	24	1.7	0.3	1.2	2.1	0.2	1.3
With other brain or nervous diseases	23	7	30	1.7	1.0	1.5	2.2	0.9	1.6
Alcoholic	90	..	90	6.8	..	4.5	8.4	..	4.8
With other somatic diseases	17	18	35	1.3	2.6	1.8	1.6	2.2	1.9
Manic-depressive	143	163	306	10.9	23.9	15.3	13.4	19.9	16.2
Involution melancholia	17	22	39	1.3	3.2	2.0	1.6	2.7	2.1
Dementia præcox	320	212	532	24.3	31.1	26.6	29.8	25.9	28.1
Paranoia or paranoic conditions	7	3	10	0.5	0.4	0.5	0.7	0.4	0.5
Epileptic psychoses	20	6	26	1.5	0.9	1.3	1.9	0.7	1.4
Psychoneuroses and neuroses	10	8	18	0.8	1.2	0.9	0.9	1.0	1.0
With psychopathic personality	25	12	37	1.9	1.8	1.9	2.3	1.5	2.0
With mental deficiency	29	16	45	2.2	2.4	2.3	2.7	2.0	2.4
All other psychoses	6	2	8	0.5	0.3	0.4	0.6	0.2	0.4
Undiagnosed psychoses	30	12	42	2.3	1.8	2.1	2.8	1.5	2.2
Without psychosis	8	5	13	0.6	0.7	0.7	0.7	0.6	0.7
Total	1,316	681	1,997	100.0	100.0	100.0	123.0	83.3	105.8

Of the 1,997 first admissions, 532, or 26.6 per cent, were cases of dementia præcox. General paresis and manic-depressive psychoses followed with 16.3 and 15.3 per cent, respectively. Psychoses with cerebral arteriosclerosis represented 12.3 per cent of the total. The senile and alcoholic groups represented relatively small totals, including only 7.8 and 4.5 per cent, respectively, of the first admissions. The sex differences were marked. Among males dementia præcox, which included 24.3 per cent of the total first admissions, was almost equaled by the group with general paresis, the latter including 22.9 per cent. These were greatly in excess of the remaining groups. Psychoses with cerebral arteriosclerosis and manic-depressive psychoses included 11.8 and 10.9 per cent, respectively. The alcoholic psychoses represented 6.8 per cent of the total. Among the females, dementia præcox and the manic-depressive psychoses greatly exceeded the remaining groups, representing 31.1 and 23.9 per cent, respectively, both exceeding the corresponding percentages among males. Psychoses with cerebral arteriosclerosis and senile psychoses followed with 13.2 and 11.3 per cent, respectively, the latter markedly in excess of the corresponding male percentage. Italian females, however, had a very low percentage of general paresis and no first admissions with alcoholic psychoses. The corresponding rates of first admission are also given in Table 3. Dementia præcox was the outstanding category with an average annual rate of 28.1 per 100,000 population. General paresis and manic-depressive psychoses followed with rates of 17.2 and 16.2, respectively. These were followed by psychoses with cerebral arteriosclerosis, senile psychoses and alcoholic psychoses. Important sex differences appear as follows: Males had a rate of 28.1 with general paresis, compared with a rate of only 2.9 among females. Males had a rate of 8.4 with alcoholic psychoses, whereas these psychoses were absent among the females. The latter, however, were markedly in excess in the manic-depressive psychoses.

The preceding rates of first admission cannot be properly compared with those for natives of native parentage, because of the important differences in age between the two groups. The foreign-born group, with relatively few children, and many adults, represents an unfavorable selection from the viewpoint of mental dis-

TABLE 4. AVERAGE ANNUAL STANDARDIZED RATES OF FIRST ADMISSIONS TO ALL INSTITUTIONS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, AMONG NATIVE WHITES OF NATIVE PARENTAGE AND FOREIGN WHITES BORN IN ITALY

Psychoses	Native whites of native parentage			Foreign-born Italians			Ratio of rate of first admissions among foreign-born Italians to that of native whites of native parentage		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Senile*	16.6±1.3	16.0±1.3	17.7±0.9	28.1±3.1	29.9±3.7	31.7±2.5	1.7	1.9	1.8
With cerebral arteriosclerosis*	36.2±1.9	22.6±1.5	30.1±1.2	47.2±4.0	32.6±3.9	41.2±2.8	1.3	1.4	1.4
General paresis**	11.5±0.6	3.8±0.3	7.6±0.3	21.9±1.7	2.5±0.7	12.2±1.0	1.9	0.7	1.6
Alcoholic†	7.7±0.6	1.5±0.2	4.6±0.3	8.6±1.1	.....	4.3±0.6	1.1	..	0.9
Manic-depressive**	9.8±0.5	12.6±0.6	11.1±0.4	12.5±1.3	18.6±1.8	15.4±1.1	1.3	1.5	1.4
Dementia præcox**	18.7±0.8	15.3±0.7	16.9±0.5	34.4±2.1	26.7±2.1	30.4±1.5	1.8	1.7	1.8
All psychoses**	83.7±1.6	66.3±1.4	75.2±1.1	119.3±3.9	82.2±3.8	101.7±2.7	1.4	1.2	1.4

*Population of New York State aged 45 years and over on April 1, 1930, used as standard.

**Population of New York State aged 15 years and over on April 1, 1930, used as standard.

†Population of New York State aged 25 years and over on April 1, 1930, used as standard.

ease. Proper comparisons may be made only on the basis of standardized rates. Table 4 gives such rates for the more important groups of psychoses.

In connection with senile psychoses, and psychoses with cerebral arteriosclerosis, the population used as standard was that of the State of New York, aged 45 years and over on April 1, 1930. In the case of the alcoholic psychoses, the standard was the population aged 25 years and over. In the remaining groups and for all psychoses combined, the standard was the population aged 15 years and over.

On the preceding basis the Italians had a standardized rate of first admissions of 101.7 for all psychoses, compared with a rate of only 75.2 among natives of native parentage, the former being in excess in the ratio of 1.4 to 1. The Italian rates were in excess in all the principal psychoses, with the exception of the alcoholic group. In the latter the slight excess in favor of the native group is without statistical significance, however. On the other hand, the excess of the Italian rates in general paresis and manic-depressive psychoses must be regarded as significant. The outstanding differences occurred in connection with the senile psychoses and dementia præcox. In these groups the Italian rates were in excess in the ratio of 1.8 to 1.

Among males the Italian rate was in excess in the ratio of 1.4 to 1. In the individual groups of psychoses, the rates of the Italian males exceeded those of native males, but significance can be attached only to the differences in connection with senile psychoses, general paresis and dementia præcox. In the case of the females the Italian rate was well in excess in the ratio of 1.2 to 1. The rates of Italian females were also in excess in all of the individual groups of psychoses with the exception of general paresis and the alcoholic psychoses. In the former, however, the difference is not statistically significant.

Germans

Those born in Germany totaled 349,196 on April 1, 1930, representing 10.7 per cent of all the foreign-born in New York State. In accordance with well-known immigration trends the German percentage had begun to decrease at the beginning of the century. In

1900 the German-born represented 25.3 per cent of all the foreign-born; in 1910, 15.0 per cent; and in 1920, 10.5 per cent. The slight increase in 1930 should be considered in connection with the fact that Germany itself has suffered territorial losses as a result of the war, and probably represents the trend inaugurated by the new immigration quota system. The racial significance of the data is somewhat obscured by the fact that no distinction is possible between such different stocks as those represented by north-Germans and south-Germans.

Foreign-born Germans provided 1,286 first admissions to all institutions for mental disease in New York State during 1929-1931, of whom 751, or 58.4 per cent, were males and 535, or 41.6 per cent, females. The average annual rate of first admissions was 122.8; males and females had rates of 140.5 and 104.3, respectively.

Table 5 gives average annual rates by age and sex for the German-born and native whites of native parentage.

TABLE 5. AVERAGE ANNUAL RATES OF FIRST ADMISSIONS TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE, PER 100,000 POPULATION, 1929-1931, AMONG NATIVES OF NATIVE PARENTAGE AND FOREIGN WHITES BORN IN GERMANY

Age (years)	Males			Females		
	Natives of native parentage (1)	Born in Germany (2)	Ratio of column (2) to column (1) (3)	Natives of native parentage (1)	Born in Germany (2)	Ratio of column (2) to column (1) (3)
Under 15	1.7	6.8	4.0	1.2	7.0	5.8
15-24	49.8	80.7	1.6	31.3	50.8	1.6
25-34	71.2	99.0	1.4	58.5	80.9	1.4
35-44	78.0	128.2	1.6	74.1	91.1	1.2
45-54	88.9	118.0	1.3	76.4	98.6	1.3
55-64	115.5	144.7	1.3	81.7	90.0	1.1
65-74	181.5	216.2	1.2	120.8	149.3	1.2
75 and over	281.3	443.5	1.6	212.7	313.5	1.5

Among German males the rate rose from a minimum of 6.8 under 15 years of age to a maximum of 443.5 at 75 years and over. Among German females the rate rose similarly from a minimum of 7.0 to a maximum of 313.5. The male rates were in excess of those of the

TABLE 6. FIRST ADMISSIONS TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, AMONG THE FOREIGN WHITES BORN IN GERMANY

Psychoses	Number of first admissions			Per cent of total first admissions			Average annual rate per 100,000 population born in Germany		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Traumatic	9	1	10	1.2	0.2	0.8	1.7	0.2	1.0
Senile	108	118	226	14.4	22.1	17.6	20.2	23.0	21.6
With cerebral arteriosclerosis	184	111	295	24.5	20.7	22.9	34.4	21.6	28.2
General paresis	111	24	135	14.8	4.5	10.5	20.8	4.7	12.9
With cerebral syphilis	9	1	10	1.2	0.2	0.8	1.7	0.2	1.0
With other brain or nervous diseases	6	2	8	0.8	0.4	0.6	1.1	0.4	0.8
Alcoholic	37	3	40	4.9	0.6	3.1	6.9	0.6	3.8
With other somatic diseases	8	13	21	1.1	2.4	1.6	1.5	2.5	2.0
Manic-depressive	54	90	144	7.2	16.8	11.2	10.1	17.5	13.7
Involution melancholia	9	13	22	1.2	2.4	1.7	1.7	2.5	2.1
Dementia præcox	175	119	294	23.3	22.2	22.9	32.8	23.2	28.1
Paranoia or paranoic conditions	5	7	12	0.7	1.3	0.9	0.9	1.4	1.1
Epileptic psychoses	6	2	8	0.8	0.4	0.6	1.1	0.4	0.8
Psychoneuroses and neuroses	2	6	8	0.3	1.1	0.6	0.4	1.2	0.8
With psychopathic personality	5	8	13	0.7	1.5	1.0	0.9	1.6	1.2
With mental deficiency	7	5	12	0.9	0.9	0.9	1.3	1.0	1.1
All other psychoses	1	3	4	0.1	0.6	0.3	0.2	0.6	0.4
Undiagnosed psychoses	11	7	18	1.4	1.3	1.4	2.1	1.4	1.7
Without psychosis	4	2	6	0.5	0.4	0.5	0.7	0.4	0.6
Total	751	535	1,286	100.0	100.0	100.0	140.5	104.3	122.8

females in each age interval. Compared to the native group, the German group showed higher rates in each age interval. The ratio of the corresponding rates was a maximum under 15 years of age. The rates in this interval probably are not reliable, however. In the other intervals the ratios appear to decline in middle life, and to increase thereafter.

The distribution of the psychoses among the German-born first admissions is shown in Table 6.

Psychoses with cerebral arteriosclerosis included 295 of the 1,286 first admissions, or 22.9 per cent. The corresponding average annual rate of first admissions was 28.2. Dementia præcox ranked practically as high as the arteriosclerotic group. The high rank of the latter group undoubtedly resulted from the fact that the Germans are an older immigrant group and therefore include many in those age intervals subject to arteriosclerotic degeneration. For similar reasons the senile psychoses ranked relatively high, including 17.6 per cent of the total first admissions and representing a rate of 21.6. The manic-depressive psychoses and general paresis followed in the order named. There are the usual sex differences in the leading psychoses.

Table 7 includes standardized rates of first admission, enabling us to compare the German-born with native whites of native parentage.

The German-born had a standardized rate of 104.0 per 100,000 population, compared with a rate of 75.2 among native whites of native parentage, the former being in excess in the ratio of 1.4 to 1. Among males the rates were 120.1 and 83.7 for the German and native groups, respectively, a ratio of 1.4 to 1. Among the females the corresponding rates were 87.1 and 66.3, a ratio of 1.3 to 1. The excess was greatest in connection with dementia præcox, where the rate of German males was in excess in the ratio of 2.4 to 1. Among females the rates were in the ratio of 1.8 to 1. The German excess was also relatively high in general paresis and in the manic-depressive group. Only in the alcoholic psychoses was the German rate low, but the difference does not appear to be significant.

TABLE 7. AVERAGE ANNUAL STANDARDIZED RATES OF FIRST ADMISSIONS TO ALL INSTITUTIONS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, AMONG NATIVE WHITES OF NATIVE PARENTAGE AND FOREIGN WHITES BORN IN GERMANY

Psychoses	Native whites of native parentage			Foreign-born Germans			Ratio of rate of first admissions among foreign-born Germans to that of native whites of native parentage		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Senile*	16.6±1.3	16.0±1.3	17.7±0.9	25.0±3.5	25.2±3.5	27.0±2.6	1.5	1.6	1.5
With cerebral arteriosclerosis*	36.2±1.9	22.6±1.5	30.1±1.2	50.0±5.0	29.6±3.8	40.8±3.2	1.4	1.3	1.4
General paresis**	11.5±0.6	3.8±0.3	7.6±0.3	20.1±2.3	4.8±1.1	12.3±1.3	1.7	1.3	1.6
Alcoholic†	7.7±0.6	1.5±0.2	4.6±0.3	7.0±1.4	0.4±0.3	3.8±0.8	0.9	0.3	0.8
Manic-depressive**	9.8±0.5	12.6±0.6	11.1±0.4	12.5±1.8	22.7±2.5	17.5±1.5	1.3	1.8	1.6
Dementia præcox**	18.7±0.8	15.3±0.7	16.9±0.5	44.8±3.4	27.1±2.7	35.7±2.2	2.4	1.8	2.1
All psychoses**	83.7±1.6	66.3±1.4	75.2±1.1	120.1±5.6	87.1±4.9	104.0±3.7	1.4	1.3	1.4

*Population of New York State aged 45 years and over on April 1, 1930, used as standard.

**Population of New York State aged 15 years and over on April 1, 1930, used as standard.

†Population of New York State aged 25 years and over on April 1, 1930, used as standard.

Irish

On April 1, 1930 there were 293,225 persons of Irish birth in New York State, who constituted 9.0 per cent of all the foreign-born. Their percentage has decreased steadily in the past three decades. In 1900 they represented 22.4 per cent of the total foreign-born. In 1910 the percentage was 13.4. It fell still further to 10.1 in 1920. Despite the decrease in 1930 it is likely, however, that the percentage of Irish-born will increase in the future as a result of the newer immigration policies.

During the three years 1929-1931 the Irish-born provided 1,724 first admissions to all hospitals for mental disease in New York State. This represented an average annual rate of first admissions of 196.0 per 100,000 population. Males and females had rates of 214.7 and 181.6, respectively. Average annual rates of first admission are shown by sex and age in Table 8.

Table 8. Average Annual Rates of First Admissions to All Hospitals for Mental Disease in New York State, Per 100,000 Population, 1929-1931, Among Natives of Native Parentage and Foreign Whites Born in Ireland

Age (years)	Males			Females		
	Natives of native parentage (1)	Born in Ireland (2)	Ratio of column (2) to column (1) (3)	Natives of native parentage (1)	Born in Ireland (2)	Ratio of column (2) to column (1) (3)
Under 15	1.7	..	..	1.2	..	..
15-24	49.8	92.6	1.9	31.3	61.9	2.0
25-34	71.2	108.2	1.5	58.5	91.2	1.6
35-44	78.0	155.0	2.0	74.1	148.8	2.0
45-54	88.9	218.6	2.5	76.4	159.2	2.1
55-64	115.5	317.6	2.7	81.7	193.1	2.4
65-74	181.5	443.2	2.4	120.8	374.0	3.1
75 and over	281.3	631.0	2.2	212.7	746.6	3.5

Among males born in Ireland the rate rose from a minimum of 92.6 at 15 to 24 years to a maximum of 631.0 at 75 years and over. The rate also rose regularly among females from a minimum of 61.9 to a maximum of 746.6. The male rate exceeded that of the females in every interval, except at 75 years and over.

TABLE 9. FIRST ADMISSIONS TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, AMONG THE FOREIGN WHITES BORN IN IRELAND

Psychoses	Number of first admissions			Per cent of total first admissions			Average annual rate per 100,000 population born in Ireland		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Traumatic	44	1	45	5.4	0.1	2.6	11.5	0.2	5.1
Senile	89	208	297	10.8	23.0	17.2	23.3	41.8	33.8
With cerebral arteriosclerosis	208	234	442	25.3	25.9	25.6	54.4	47.1	50.2
General paresis	52	10	62	6.3	1.1	3.6	13.6	2.0	7.1
With cerebral syphilis	6	2	8	0.7	0.2	0.4	1.6	0.4	0.9
With other brain or nervous diseases	8	6	14	1.0	0.7	0.8	2.1	1.2	1.6
Alcoholic	176	49	225	21.4	5.4	13.1	46.0	9.9	25.6
With other somatic diseases	15	15	30	1.8	1.7	1.8	3.9	3.0	3.4
Manic-depressive	56	112	168	6.8	12.4	9.8	14.7	22.5	19.1
Involution melancholia	14	39	53	1.7	4.3	3.1	3.7	7.8	6.0
Dementia præcox	96	176	272	11.7	19.4	15.8	25.1	35.4	30.9
Paranoia or paranoic conditions	5	10	15	0.6	1.2	0.9	1.3	2.0	1.7
Epileptic psychoses	5	5	10	0.6	0.6	0.6	1.3	1.0	1.1
Psychoneuroses and neuroses	4	4	8	0.5	0.4	0.4	1.1	0.8	0.9
With psychopathic personality	9	5	14	1.1	0.6	0.8	2.4	1.0	1.6
With mental deficiency	7	8	15	0.9	0.9	0.9	1.8	1.6	1.7
All other psychoses	6	..	6	0.7	..	0.3	1.6	..	0.7
Undiagnosed psychoses	13	17	30	1.6	1.9	1.7	3.4	3.4	3.4
Without psychosis	7	3	10	0.9	0.3	0.6	1.8	0.6	1.1
Total	821	903	1,724	100.0	100.0	100.0	214.7	181.6	196.0

The Irish rates exceeded those of the native white population in every age interval (see Table 8). Among males the excess increased, with one exception, to a maximum ratio of 2.7 to 1 at 55 to 64 years. Thereafter the excess decreased. Among females the Irish rate increased more rapidly with advancing age than did the native rate, the two being in the ratio of 3.5 to 1 at 75 years and over.

The first admissions born in Ireland are classified according to psychoses in Table 9.

The outstanding characteristic was the low percentage of dementia præcox (only 15.8) and the high percentages of the psychoses associated with old age (senile, 17.2; arteriosclerosis, 25.6). These are undoubtedly associated with the age distribution of the Irish, who because of their long period of residence include a large proportion of older people. Of additional significance is the high percentage and high admission rate with alcoholic psychoses. This is especially true of the males, among whom the alcoholic psychoses ranked second only to psychoses with cerebral arteriosclerosis.

A comparison with the natives of native parentage is afforded in Table 10.

The Irish-born had a standardized rate of first admissions of 161.3 per 100,000 population. Males and females had rates of 177.5 and 142.7, respectively. These rates were more than twice those of the native white population. The excess was especially significant in the alcoholic psychoses, in which the rate of the Irish males was in excess in the ratio of 6.5 to 1; that of the Irish females was in excess in the ratio of 7.3 to 1. The Irish rates were also greatly in excess in the senile psychoses and in psychoses with cerebral arteriosclerosis. Only in general paresis were the rates comparable.

English

White persons born in England totaled 146,485 in New York State on April 1, 1930 and represented 4.5 per cent of all the foreign white. Their percentage had been steadily decreasing since 1900 but it is likely that succeeding decades will see an upward change in the trend.

TABLE 10. AVERAGE ANNUAL STANDARDIZED RATES OF FIRST ADMISSIONS TO ALL INSTITUTIONS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, AMONG NATIVE WHITES OF NATIVE PARENTAGE AND FOREIGN WHITES BORN IN IRELAND

Psychoses	Native whites of native parentage			Foreign-born Irish			Ratio of rate of first admissions among foreign-born Irish to that of native whites of native percentage		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Senile*	16.6±1.3	16.0±1.3	17.7±0.9	39.9±5.5	64.2±5.9	56.2±4.2	2.4	4.0	3.2
With cerebral arteriosclerosis*	36.2±1.9	22.6±1.5	30.1±1.2	101.2±8.7	80.9±6.6	93.7±5.4	2.8	3.6	3.1
General paresis**	11.5±0.6	3.8±0.3	7.6±0.3	11.6±2.1	2.1±0.9	6.8±1.0	1.0	0.6	0.9
Alcoholic†	7.7±0.6	1.5±0.2	4.6±0.3	50.1±4.5	11.0±1.9	30.5±2.3	6.5	7.3	6.6
Manic-depressive**	9.8±0.5	12.6±0.6	11.1±0.4	17.8±2.5	26.5±2.7	22.0±1.9	1.8	2.1	2.0
Dementia præcox**	18.7±0.8	15.3±0.7	16.9±0.5	29.6±3.3	37.4±3.2	33.0±2.3	1.6	2.4	2.0
All psychoses**	83.7±1.6	66.3±1.4	75.2±1.1	177.5±8.0	142.7±6.3	161.3±5.0	2.1	2.2	2.1

*Population of New York State aged 45 years and over on April 1, 1930, used as standard.

**Population of New York State aged 15 years and over on April 1, 1930, used as standard.

†Population of New York State aved 25 years and over on April 1, 1930, used as standard.

During the three years 1929-1931 there were 538 first admissions to all institutions for mental disease in New York State, who were born in England. Of this total 290, or 53.9 per cent, were males, and 248, or 46.1 per cent, females. There was an average annual rate of first admissions of 122.4 per 100,000 population. Males and females had rates of 131.9 and 113.0, respectively.

Rates of first admission are shown according to sex and age in Table 11.

TABLE 11. AVERAGE ANNUAL RATES OF FIRST ADMISSIONS TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE PER 100,000 POPULATION, AMONG NATIVES OF NATIVE PARENTAGE AND FOREIGN WHITES BORN IN ENGLAND

Age (years)	Males			Females		
	Natives of native parentage (1)	Born in England (2)	Ratio of column (2) to column (1) (3)	Natives of native parentage (1)	Born in England (2)	Ratio of column (2) to column (1) (3)
Under 15	1.7	..	..	1.2	..	..
15-24	49.8	74.2	1.5	31.3	46.3	1.5
25-34	71.2	57.1	0.8	58.5	67.1	1.1
35-44	78.0	104.6	1.3	74.1	83.2	1.1
45-54	88.9	109.6	1.2	76.4	106.7	1.4
55-64	115.5	157.7	1.4	81.7	146.9	1.8
65-74	181.5	302.4	1.7	120.8	185.1	1.5
75 and over	281.3	477.4	1.7	212.7	454.6	2.1

Among males born in England there was a rate of 74.2 at 15 to 24 years, followed by a drop, probably accidental, to 57.1 at 25 to 34 years. Thereafter the rate rose without interruption to a maximum of 477.4 at 75 years and over. Among females the rates rose regularly from a minimum of 46.3 to a maximum of 454.6. The male rates were greatly in excess of those of the females in every age interval, except 25 to 34 years. Both sexes had rates in excess of those of the native white population of native parentage, the sole exception occurring among males, aged 25 to 34 years. The disparity in rates of the English and natives decreased between childhood and early maturity, but grew rapidly after middle life.

The first admissions among the English are classified according to psychoses in Table 12.

TABLE 12. FIRST ADMISSIONS TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, AMONG THE FOREIGN WHITES BORN IN ENGLAND

Psychoses	Number of first admissions			Per cent of total first admissions			Average annual rate per 100,000 population born in England		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Traumatic	6	..	6	2.1	..	1.1	2.7	..	1.4
Senile	39	52	91	13.4	21.0	16.9	17.7	23.7	20.7
With cerebral arteriosclerosis	75	51	126	25.9	20.6	23.4	34.1	23.2	28.7
General paresis	41	8	49	14.1	3.2	9.1	18.6	3.6	11.2
With cerebral syphilis	3	2	5	1.0	0.8	0.9	1.4	0.9	1.1
With other brain or nervous diseases	5	1	6	1.7	0.4	1.1	2.3	0.5	1.4
Alcoholic	11	8	19	3.8	3.2	3.5	5.0	3.6	4.3
With other somatic diseases	3	5	8	1.0	2.0	1.5	1.4	2.3	1.8
Manic-depressive	23	31	54	7.9	12.5	10.0	10.4	14.1	12.3
Involution melancholia	9	14	23	3.1	5.6	4.3	4.1	6.4	5.2
Dementia præcox	45	47	92	15.5	19.0	17.1	20.4	21.4	20.9
Paranoia or paranoic conditions	5	3	8	1.7	1.2	1.5	2.3	1.4	1.8
Epileptic psychoses	5	3	8	1.7	1.2	1.5	2.3	1.4	1.8
Psychoneuroses and neuroses	8	5	13	2.8	2.0	2.4	3.6	2.3	3.0
With psychopathic personality	9	6	15	3.1	2.4	2.8	4.1	2.7	3.4
With mental deficiency	..	6	6	..	2.4	1.1	..	2.7	1.4
All other psychoses	..	1	1	..	0.4	0.2	..	0.5	0.2
Undiagnosed psychoses	2	4	6	0.7	1.6	1.1	0.9	1.8	1.4
Without psychosis	1	1	2	0.4	0.4	0.4	0.5	0.5	0.5
Total	290	248	538	100.0	100.0	100.0	131.9	113.0	122.4

TABLE 13. AVERAGE ANNUAL STANDARDIZED RATES OF FIRST ADMISSIONS TO ALL INSTITUTIONS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, AMONG NATIVE WHITES OF NATIVE PARENTAGE AND FOREIGN WHITES BORN IN ENGLAND

Psychoses	Native whites of native parentage			Foreign-born English			Ratio of rate of first admissions among foreign-born English to that of native whites of native parentage		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Senile*	16.6±1.3	16.0±1.3	17.7±0.9	26.2±5.8	34.1±6.6	32.8±4.6	1.6	2.1	1.9
With cerebral arteriosclerosis*	36.2±1.9	22.6±1.5	30.1±1.2	58.5±8.6	41.3±7.2	51.3±5.7	1.6	1.8	1.7
General paresis**	11.5±0.6	3.8±0.3	7.6±0.3	15.4±3.1	3.3±1.5	9.3±1.7	1.3	0.9	1.2
Alcoholic†	7.7±0.6	1.5±0.2	4.6±0.3	5.4±1.9	4.4±1.8	4.8±1.3	0.7	2.9	1.0
Manic-depressive**	9.8±0.5	12.6±0.6	11.1±0.4	11.5±2.7	16.4±3.2	13.9±2.1	1.2	1.3	1.3
Dementia præcox**	18.7±0.8	15.3±0.7	16.9±0.5	28.5±4.3	23.4±4.5	25.8±2.9	1.5	1.5	1.5
All psychoses**	83.7±1.6	66.3±1.4	75.2±1.1	108.5±8.3	92.0±7.7	101.1±5.7	1.3	1.4	1.3

*Population of New York State aged 45 years and over on April 1, 1930, used as standard.

**Population of New York State aged 15 years and over on April 1, 1930, used as standard.

†Population of New York State aged 25 years and over on April 1, 1930, used as standard.

Psychoses with cerebral arteriosclerosis represented the outstanding category, including 126 of the 538 first admissions, or 23.4 per cent. Dementia præcox followed with 92 cases, or 17.1 per cent. Senile psychoses included 16.9 per cent. Manic-depressive psychoses and general paresis followed with 10.0 and 9.1 per cent, respectively. General paresis represented a relatively high total among males, being exceeded only by the arteriosclerotic group and dementia præcox.

Rates of first admission among the English-born are compared with those for native whites of native parentage in Table 13.

The English had a standardized rate of 101.1 per 100,000 population, which exceeded that of the native group in the ratio of 1.3 to 1. English males and females had standardized rates of 108.5 and 92.0, respectively, these exceeding the corresponding rates among natives in ratios of 1.3 to 1 and 1.4 to 1, respectively; the differences, however, are not statistically significant. The greatest excesses were found in the senile and arteriosclerotic groups, though the probable errors are very large. In general paresis English females had a slightly lower rate than the natives. In the alcoholic psychoses the English males had a lower rate than native males, but English females had a rate considerably higher than that of native females.

Scandinavians

On April 1, 1930 there were in New York State 44,882 persons born in Norway, 61,233 born in Sweden, and 17,407 born in Denmark, a total of 123,522, representing 3.8 per cent of the total foreign-born population. Their percentage has been growing slowly but steadily since 1910 and the trend will undoubtedly continue.

There were 446 first admissions to all institutions for mental disease in New York State during 1929-1931, among persons born in Norway, Sweden or Denmark, of whom 279, or 62.6 per cent, were males, and 167, or 37.4 per cent, females. There was an average annual rate of first admissions of 120.4 per 100,000 population. Males and females had rates of 136.8 and 100.2, respectively.

Table 14 gives rates of first admission according to sex and age for persons of Scandinavian birth and native whites of native parentage.

TABLE 14. AVERAGE ANNUAL RATES OF FIRST ADMISSIONS TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE, PER 100,000 POPULATION, 1929-1931, AMONG NATIVES OF NATIVE PARENTAGE AND FOREIGN WHITES BORN IN NORWAY, SWEDEN AND DENMARK

Age (years)	Males			Females		
	Natives of native parentage (1)	Born in Norway, Sweden and Denmark (2)	Ratio of column (2) to column (1) (3)	Natives of native parentage (1)	Born in Norway, Sweden and Denmark (2)	Ratio of column (2) to column (1) (3)
Under 15	1.7	..	..	1.2	..	..
15-24	49.8	74.3	1.5	31.3	50.4	1.6
25-34	71.2	113.8	1.6	58.5	66.4	1.1
35-44	78.0	129.1	1.7	74.1	103.9	1.4
45-54	88.9	134.5	1.5	76.4	131.9	1.7
55-64	115.5	133.7	1.2	81.7	100.6	1.2
65-74	181.5	255.6	1.4	120.8	135.2	1.1
75 and over	281.3	679.1	2.4	212.7	260.4	1.2

With one minor exception rates of first admission rose among Scandinavian males from a minimum of 74.3 at 15 to 24 years to a maximum of 679.1 at 75 years and over. Among females the rates rose from 50.4 to 260.4. The male rate was uniformly in excess of that of the females. Both sets of rates were in excess of the corresponding rates among natives of native parentage. In general the rates of Scandinavian males exceeded those of native males in ratios greater than those of the females.

The first admissions are classified according to psychoses in Table 15.

Dementia præcox is the outstanding group, including 26.5 per cent of the total first admissions. Psychoses with cerebral arteriosclerosis and general paresis followed with 16.6 and 13.2 per cent, respectively. The manic-depressive psychoses included 12.8 per cent. There were the usual sex differences. General paresis, however, ranked almost as high as psychoses with cerebral arteriosclerosis among males. The alcoholic psychoses were also relatively high among males. Among females the manic-depressive psychoses ranked only slightly lower than dementia præcox.

TABLE 15. FIRST ADMISSIONS TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, AMONG THE FOREIGN WHITES BORN IN NORWAY, SWEDEN AND DENMARK

Psychoses	Number of first admissions			Per cent of total first admissions			Average annual rate per 100,000 population born in Norway, Sweden and Denmark		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Traumatic	4	..	4	1.4	..	0.9	2.0	..	1.1
Senile	24	15	39	8.6	9.0	8.8	11.8	9.0	10.5
With cerebral arteriosclerosis	50	24	74	17.9	14.4	16.6	24.5	14.4	20.0
General paresis	49	10	59	17.6	6.0	13.2	24.0	6.0	15.9
With cerebral syphilis	1	..	1	0.4	..	0.2	0.5	..	0.3
With other brain or nervous diseases	4	4	8	1.4	2.4	1.8	2.0	2.4	2.2
Alcoholic	28	1	29	10.0	0.6	6.5	13.7	0.6	7.8
With other somatic diseases	3	7	10	1.1	4.2	2.3	1.4	4.2	2.7
Manic-depressive	17	40	57	6.1	24.0	12.8	8.3	24.0	15.4
Involution melancholia	7	11	18	2.5	6.6	4.0	3.4	6.6	4.9
Dementia præcox	74	44	118	26.5	26.3	26.5	36.3	26.4	31.8
Paranoia or paranoic conditions	1	3	4	0.4	1.8	0.9	0.5	1.8	1.1
Epileptic psychoses	1	1	2	0.4	0.6	0.4	0.5	0.6	0.5
Psychoneuroses and neuroses	3	2	5	1.1	1.2	1.1	1.4	1.2	1.3
With psychopathic personality	3	2	5	1.1	1.2	1.1	1.4	1.2	1.3
With mental deficiency	1	..	1	0.4	..	0.2	0.5	..	0.3
All other psychoses	3	1	4	1.1	0.6	0.9	1.4	0.6	1.1
Undiagnosed psychoses	4	2	6	1.4	1.2	1.3	2.0	1.2	1.6
Without psychosis	2	..	2	0.7	..	0.4	1.0	..	0.5
Total	279	167	446	100.0	100.0	100.0	136.8	100.2	120.4

TABLE 16. AVERAGE ANNUAL STANARDIZED RATES OF FIRST AMISSIONS TO ALL INSTITUTIONS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, AMONG NATIVE WHITES OF NATIVE PARENTAGE AND FOREIGN WHITES BORN IN NORWAY, SWEDEN AND DENMARK

Psychoses	Native whites of native parentage			Foreign-born Scandinavians			Ratio of rate of first admissions among foreign-born Scandinavians to that of native whites of native parentage		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Senile*	16.6±1.3	16.0±1.3	17.7±0.9	32.4±7.4	19.4±5.7	27.6±4.9	2.0	1.2	1.6
With cerebral arteriosclerosis*	36.2±1.9	22.6±1.5	30.1±1.2	58.1±9.9	31.1±7.5	45.3±4.1	1.6	1.4	1.5
General paresis**	11.5±0.6	3.8±0.3	7.6±0.3	21.6±3.8	5.1±1.9	13.2±2.2	1.9	1.3	1.7
Alcoholic†	7.7±0.6	1.5±0.2	4.6±0.3	15.1±3.4	0.6±0.7	7.9±1.8	2.0	0.4	1.7
Manic-depressive**	9.8±0.5	12.6±0.6	11.1±0.4	9.1±2.5	25.4±4.6	17.0±2.5	0.9	2.0	1.5
Dementia præcox**	18.7±0.8	15.3±0.7	16.9±0.5	40.5±5.3	27.8±4.4	33.8±3.6	2.2	1.8	2.0
All psychoses**	83.7±1.6	66.3±1.4	75.2±1.1	129.7±9.4	91.1±8.7	110.4±6.5	1.5	1.4	1.5

*Population of New York State aged 45 years and over on April 1, 1930, used as standard.

**Population of New York State aged 15 years and over on April 1, 1930, used as standard.

†Population of New York State aged 25 years and over on April 1, 1930, used as standard.

Comparisons with rates of first admissions among the native whites of native parentage are afforded in Table 16.

Foreign-born Scandinavians had a standardized rate of 110.4, which exceeded that of natives of native parentage in the ratio of 1.5 to 1. Scandinavian-born males and females had rates in excess of those of the corresponding groups of natives in ratios of 1.5 to 1 and 1.4 to 1, respectively. The greatest excess was found in dementia præcox, the male Scandinavian rate being in excess in the ratio of 2.2 to 1, that of the females in the ratio of 1.8 to 1. Scandinavian males also had relatively high rates of senile and alcoholic psychoses and general paresis. Among females the greatest disparity occurred in the manic-depressive psychoses, the Scandinavian rate being in excess in the ratio of 2.0 to 1. Scandinavian females had a lower rate of alcoholic psychoses, though the difference is not significant.

In the preceding sections we discussed the principal results relating to the distribution of mental diseases among each of five leading foreign-born groups in New York State. In the following sections we shall compare the groups with each other, confining our comments to standardized rates of first admissions.

All Psychoses

Among all white foreign-born there was a standardized rate of 108.8 per 100,000 population. The Irish were far in excess with a rate of 161.3. Scandinavians were also above the average, though the difference is not statistically significant. England, Italy and Germany had rates below the average, though the differences cannot be regarded as significant.

Among males there was a rate of 120.1 among all foreign whites. The Irish had the maximum with a rate of 177.5. Scandinavians were also above the average. England and Italy had rates below the average. Among females, the Irish had the highest rate, 142.7, compared with only 95.7 among all foreign females. The lowest rates occurred among Italians and Germans.

TABLE 17. AVERAGE ANNUAL NUMBER OF FOREIGN WHITE FIRST ADMISSIONS TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, PER 100,000 POPULATION, CLASSIFIED ACCORDING TO COUNTRY OF BIRTH

	Crude			Standardized*		
	Males	Females	Total	Males	Females	Total
Italy	123.0±3.9	83.3±3.7	105.8±2.7	119.3±3.9	82.2±3.8	101.7±2.7
Germany	140.5±6.0	104.3±5.3	122.8±4.0	120.1±5.6	87.1±4.9	104.0±3.7
Ireland	214.7±8.7	181.6±7.0	196.0±5.5	177.5±8.0	142.7±6.3	161.3±5.0
England	131.9±9.0	113.0±8.4	122.4±6.2	108.5±8.3	92.0±7.7	101.1±5.7
Scandinavia	136.8±9.6	100.2±8.0	120.4±6.3	129.7±9.4	91.1±8.7	110.4±6.5
All white foreign born	125.5±1.9	104.0±1.8	115.1±1.3	120.1±1.8	95.7±1.7	108.8±1.3
Native whites of native parentage	59.6±1.1	47.8±1.0	53.7±0.7	83.7±1.6	66.3±1.4	75.2±1.1

*Population of New York State aged 15 years and over on April 1, 1930, used as standard.

SENILE PSYCHOSES

The average annual standardized rate of first admissions with senile psychoses among all foreign whites was 32.2. Ireland, with a rate of 56.2, had the maximum. The other groups had rates that did not differ significantly from each other, nor from the general average.

Among foreign white males there was an average of 25.0. The Irish exceeded this with a rate of 39.9. Scandinavians were also above the average, though the difference was not significant. The rate for all foreign white females was 33.5. The Irish had the maximum rate of 64.2. Scandinavians had the lowest rate among the five groups, though the difference cannot be regarded as significant.

TABLE 18. AVERAGE ANNUAL NUMBER OF FOREIGN WHITE FIRST ADMISSIONS WITH SENILE PSYCHOSES TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE 1929-1931, PER 100,000 POPULATION, CLASSIFIED ACCORDING TO COUNTRY OF BIRTH

	Crude			Standardized*		
	Males	Females	Total	Males	Females	Total
Italy	7.4±1.0	9.4±1.3	8.3±0.8	28.1±3.1	29.9±3.7	31.7±2.5
Germany	20.2±2.3	23.0±2.5	21.6±1.7	25.0±3.5	25.2±3.5	27.0±2.6
Ireland	23.3±2.9	41.8±3.4	33.8±2.3	39.9±5.5	64.2±5.9	56.2±4.2
England	17.7±3.3	23.7±3.8	20.7±2.5	26.2±5.8	34.1±6.6	32.8±4.6
Scandinavia	11.8±2.8	9.0±2.7	10.5±1.8	32.4±7.4	19.4±5.7	27.6±4.9
All white foreign born	9.3±0.5	15.0±0.7	12.1±0.4	25.0±1.3	33.5±1.5	32.2±1.1
Native whites of native parentage	4.8±0.3	5.2±0.3	5.0±0.2	16.6±1.3	16.0±1.3	17.7±0.9

*Population of New York State aged 45 years and over on April 1, 1930, used as standard.

Psychoses with Cerebral Arteriosclerosis

Germans had the minimum standardized rate of 40.8 for psychoses with cerebral arteriosclerosis, Ireland the maximum, 93.7, with an average of 46.0 for all foreign whites. Italians also had a low rate.

Males had higher rates than females. The average for all foreign white males was 50.1. The Irish had the maximum rate of 101.2. The others did not differ from each other significantly. Foreign white females had a rate of 39.3. The Irish again had the maximum, 80.9. Germans had a low rate of 29.6.

Table 19. Average Annual Number of Foreign White First Admissions with Psychoses with Cerebral Arteriosclerosis to All Hospitals for Mental Disease in New York State, 1929-1931, Per 100,000 Population, Classified According to Country of Birth

	Crude			Standardized*		
	Males	Females	Total	Males	Females	Total
Italy	14.4±1.3	11.0±1.4	13.0±1.0	47.2±4.0	32.6±3.9	41.2±2.8
Germany	34.4±3.0	21.6±2.4	28.2±1.9	50.0±5.0	29.6±3.8	40.8±3.2
Ireland	54.4±4.4	47.1±3.6	50.2±2.8	101.2±8.7	80.9±6.6	93.7±5.4
England	34.1±4.6	23.2±3.8	28.7±3.0	58.5±8.6	41.3±7.2	51.3±5.7
Scandinavia	24.5±4.0	14.4±3.0	20.0±2.5	58.1±9.9	31.1±7.5	45.3±4.1
All white foreign born	19.7±0.7	16.7±0.7	18.2±0.5	50.1±1.8	39.3±1.7	46.0±1.3
Native whites of native parentage	8.9±0.4	5.9±0.3	7.4±0.3	36.2±1.9	22.6±1.5	30.1±1.2

*Population of New York State aged 45 years and over on April 1, 1930, used as standard.

General Paresis

All foreign whites had a standardized rate of 9.8, only slightly higher than that for native whites of native parentage. The lowest rates occurred among the Irish and English, with rates of 6.8 and 9.3, respectively, both rates being less than that for natives of native parentage. Scandinavians, Italians and Germans had rates above the average.

Foreign white males had a rate of 16.2. The Irish were below the average with a rate of 11.6. Italians with 21.9, Scandinavians with

21.6, and Germans with 20.1, were above the average. The minimum rate for females, 2.1, occurred among the Irish. Italians and English followed with rates of 2.5 and 3.3, respectively. The highest rates occurred among the Scandinavians, 5.1, and Germans, 4.8.

TABLE 20. AVERAGE ANNUAL NUMBER OF FOREIGN WHITE FIRST ADMISSIONS WITH GENERAL PARESIS TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, PER 100,000 POPULATION, CLASSIFIED ACCORDING TO COUNTRY OF BIRTH

	Crude			Standardized*		
	Males	Females	Total	Males	Females	Total
Italy	28.1±1.9	2.9±0.7	17.2±1.1	21.9±1.7	2.5±0.7	12.2±1.0
Germany	20.8±2.3	4.7±1.1	12.9±1.3	20.1±2.3	4.8±1.1	12.3±1.3
Ireland	13.6±2.2	2.0±0.7	7.1±1.0	11.6±2.1	2.1±0.9	6.8±1.0
England	18.6±3.4	3.6±1.5	11.2±1.9	15.4±3.1	3.3±1.5	9.3±1.7
Scandinavia	24.0±4.0	6.0±2.2	15.9±2.4	21.6±3.8	5.1±1.9	13.2±2.2
All white foreign born	19.7±0.7	3.9±0.3	12.1±0.4	16.2±0.7	3.6±0.3	9.8±0.4
Native whites of native parentage	7.6±0.4	2.6±0.2	5.1±0.2	11.5±0.6	3.8±0.3	7.6±0.3

*Population of New York State aged 15 years and over on April 1, 1930, used as standard.

ALCOHOLIC PSYCHOSES

All foreign whites had an average annual standardized rate of 6.7. The minimum, 3.8, occurred in the German group. Italians also had a low rate. These rates were less than that for native whites of native parentage. The maximum, 30.5, occurred among the Irish, a rate far in excess of that of any other group.

Among males, the English group had a minimum rate of 5.4, compared with 11.4 for all foreign whites and 7.7 for native whites of native parentage. Other groups with low rates included Germany, 7.0 and Italy, 8.6. The Irish had a maximum rate of 50.1. The female rates were all low, with the exception of the Irish, who had a rate of 11.0, compared with rates of 2.1 for all foreign white females, and 1.5 for all native white females of native parentage. Italy reported no female alcoholics. Germany had a rate of 0.4, and Scandinavia, 0.6.

TABLE 21. AVERAGE ANNUAL NUMBER OF FOREIGN WHITE FIRST ADMISSIONS WITH ALCOHOLIC PSYCHOSES TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, PER 100,000 POPULATION, CLASSIFIED ACCORDING TO COUNTRY OF BIRTH

	Crude			Standardized*		
	Males	Females	Total	Males	Females	Total
Italy	8.4±1.0	.....	4.8±0.6	8.6±1.1	.....	4.3±0.6
Germany	6.9±1.3	0.6±0.1	3.8±0.7	7.0±1.4	0.4±0.3	3.8±0.8
Ireland	46.0±4.1	9.9±1.6	25.6±2.0	50.1±4.5	11.0±1.9	30.5±2.3
England	5.0±1.8	3.6±1.5	4.3±1.2	5.4±1.9	4.4±1.8	4.8±1.3
Scandinavia	13.7±3.0	0.6±0.7	7.8±1.6	15.1±3.4	0.6±0.7	7.9±1.8
All white foreign born	12.3±0.6	2.2±0.3	7.4±0.3	11.4±0.6	2.1±0.3	6.7±0.3
Native whites of native parentage	4.4±0.3	0.9±0.1	2.7±0.2	7.7±0.6	1.5±0.2	4.6±0.3

*Population of New York State aged 25 years and over on April 1, 1930, used as standard.

MANIC-DEPRESSIVE PSYCHOSES

All foreign whites had an average annual standardized rate of 15.8. The variation about this rate was small, the minimum being 13.9 among the English, and the maximum, 22.0 among the Irish. Results similar to these were found, generally, in an earlier study of average annual rates of manic-depressive psychoses in New York State during 1918-1922.[2]

The average for all foreign white males was 11.5. Scandinavians had a minimum rate of 9.1, the Irish a maximum of 17.8. Italy and Germany each had a rate of 12.5. Among females there was an average rate of 20.4 for all foreign whites, with a minimum of 16.4 for England and a maximum of 26.5 for Ireland.

TABLE 22. AVERAGE ANNUAL NUMBER OF FOREIGN WHITE FIRST ADMISSIONS WITH MANIC-DEPRESSIVE PSYCHOSES TO ALL HOSPITALS FOR MENTAL DISEASE IN NEW YORK STATE, 1929-1931, PER 100,000 POPULATION, CLASSIFIED ACCORDING TO COUNTRY OF BIRTH

	Crude			Standardized*		
	Males	Females	Total	Males	Females	Total
Italy	13.4±1.3	19.9±1.8	16.2±1.1	12.5±1.3	18.6±1.8	15.4±1.1
Germany	10.1±1.6	17.5±2.2	13.7±1.3	12.5±1.8	22.7±2.5	17.5±1.5
Ireland	14.7±2.3	22.5±2.5	19.1±1.7	17.8±2.5	26.5±2.7	22.0±1.9
England	10.4±2.5	14.1±3.0	12.3±2.0	11.5±2.7	16.4±3.2	13.9±2.1
Scandinavia	8.3±2.4	24.0±3.9	15.4±2.2	9.1±2.5	25.4±4.6	17.0±2.5
All white foreign born	11.0±0.6	19.1±0.8	14.9±0.5	11.5±0.6	20.4±0.8	15.8±0.5
Native whites of native parentage	6.7±0.4	8.6±0.4	7.6±0.3	9.8±0.5	12.6±0.6	11.1±0.4

*Population of New York State aged 15 years and over on April 1, 1930, used as standard.

Dementia Præcox

All white foreign-born had an average annual standardized rate of 32.8. The English had the minimum with 25.8, a rate which did not differ significantly from that for native whites of native parentage. Germans had the maximum with 35.7. Italy had a rate below the average. These rates do not differ significantly from each other, however.

Among males the rates varied from a minimum of 28.5 among the English to a maximum of 44.8 among the Germans, with an average of 37.4 for all foreign whites. Italy and Ireland had rates below the average. Among females there was a minimum of 23.4 for the English, and a maximum of 37.4 for the Irish. Irish females had a higher rate than Irish males, though the difference is not statistically significant.

The preceding results are in general agreement with those obtained in an earlier study, giving rates for the years 1912-1918.[3]

Table 23. Average Annual Number of Foreign White First Admissions with Dementia Præcox to All Hospitals for Mental Disease in New York State, 1929-1931, Per 100,000 Population, Classified According to Country of Birth

	Crude			Standardized*		
	Males	Females	Total	Males	Females	Total
Italy	29.8±1.9	25.9±2.1	28.1±1.4	34.4±2.1	26.7±2.1	30.4±1.5
Germany	32.8±2.9	23.2±2.5	28.1±1.9	44.8±3.4	27.1±2.7	35.7±2.2
Ireland	25.1±3.0	35.4±3.1	30.9±2.2	29.6±3.3	37.4±3.2	33.0±2.3
England	20.4±3.6	21.4±3.6	20.9±2.5	28.5±4.3	23.4±4.5	25.8±2.9
Scandinavia	36.3±4.9	26.4±4.6	31.8±3.2	40.5±5.3	27.8±4.4	33.8±3.6
All white foreign born	31.4±0.9	28.9±0.9	30.2±0.7	37.4±1.0	28.7±0.9	32.8±0.7
Native whites of native parentage	13.2±0.5	10.4±0.5	11.8±0.3	18.7±0.8	15.3±0.7	16.9±0.5

*Population of New York State aged 15 years and over on April 1, 1930, used as standard.

Summary

This study deals with the prevalence of mental disorders among five important racial groups in New York State during 1929-1931. These groups represented a total population of 1,541,750, or 47.3 per cent of all the foreign-born in the State on April 1, 1930.

Among these five foreign groups, the Irish possessed by far the

highest rate of first admissions to all institutions for mental disease. Compared with an average annual standardized rate of 75.2 per 100,000 population among native whites of native parentage, and 108.8 among all foreign-born whites, the Irish had a rate of 161.3. Their high rate was due primarily to mental disorders associated with old age and alcoholic addiction. In the senile psychoses, the Irish had the highest standardized rate, 56.2, compared with a rate of 32.2 for all foreign-born. In psychoses with cerebral arteriosclerosis they had a rate of 93.7, compared with an average of 46.0 for all foreign-born. In the alcoholic psychoses they had the unusually high rate of 30.5, compared with an average of only 6.7 for all foreign-born. They had highest rank with respect to the manic-depressive psychoses. In dementia præcox they were slightly above the average for all foreign whites with a rate of 33.0, which did not differ significantly, however, from the rates for the other groups. With respect to general paresis they showed a favorable rate. The average for this disorder among all white foreign-born was 9.8, whereas the Irish had a rate of only 6.8.

Scandinavians followed the Irish with a standardized rate of 110.4, which did not differ significantly, however, from that for all foreign whites. Their highest ranking was with respect to general paresis ,in which they exceeded the other groups. They also ranked high in the alcoholic psychoses.

The remaining groups of foreign-born all had standardized rates below the average for all foreign whites. Germany, Italy and England followed in the order named with rates of 104.0, 101.7, 101.1, respectively. These groups did not differ significantly from each other, except with respect to psychoses with cerebral arteriosclerosis and dementia præcox. With respect to the former, Germans and Italians had standardized rates of 40.8 and 41.2, respectively, whereas the English had a rate of 51.3. In dementia præcox, however, the English had a rate of 25.8, compared with rates of 35.7 and 30.4 for Germans and Italians, respectively.

These results afford an interesting check upon the opinions of some writers on race and mental disease, to the effect that the highest rates of mental disease are found among the more recent immigrant groups, and the lowest among immigrants from northwestern

Europe. Our analysis clearly indicated, on the contrary, that Italians had lower rates than all foreign-born whites, and that they were on about a par with Germans and English. The highest rates were found among the Irish and Scandinavians, the former, in particular, being far above the general average. While it thus appears, that there are wide differences in the incidence of mental disease in the several groups, it will be desirable, nevertheless, not to focus attention entirely upon matters of race. Mental disease is also a product of cultural or environmental factors, as, for example, in the causation of general paresis, or the alcoholic psychoses. These diseases are largely the by-products of social attitudes with respect to sex relations and drinking habits. The latter, in turn, are part of the social complex, which distinguishes one cultural group from another. It is important, therefore, to refrain from erecting racial theories based only upon statistical differences. One should consider the ways of life of a people. Civilizations differ even among racially homogeneous peoples. In comparing differences in mental disorders among various racial groups, let us therefore proceed warily, avoiding superficial inductions, and giving consideration to cultural factors which, recognizing no racial barriers, are related everywhere to the onset of mental disorders.

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PHYSIOTHERAPY AND HYDROTHERAPY AS IMPORTANT ADJUNCTS IN THE TREATMENT OF MENTAL DISEASE

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Glueck, in a discussion on "The Psychiatric Point of View," says: "That individuals differ very markedly in their reaction to disease is well known, and often enough the physician feels highly rewarded when he has succeeded in converting a situation in which the disease has the patient, so to speak, to one in which the patient has the disease. Mental disease is a disorder of the personality as a whole. The personality as a whole embraces all those structures and integrations of function which are familiar to us from the fields of anatomy, physiology, and biochemistry and also those higher integrations which are conditioned by the racial heritage of man and which begin to emerge with the birth of the individual and his first contacts with human beings. Disease and maladjustment of the personality as a whole, no matter under what guise they may emerge, inevitably and inescapably have some relation to this internal subjective aspect of the personality." In a more condensed manner Hinsie says the following: "A psychiatric disorder is not regarded as a purely psychic entity, but is rather representative of an imbalance of the several body systems. The imbalance is felt chiefly in the psychic sphere but it also manifests itself in other body structures and functions."

Psychiatry, then, no longer conceives of mental disease as the result of disturbances of structure and function of the brain alone; it is now recognized that the human body functions as an integrated organism and that the old differentiation between body and mind is no longer acceptable. It has become increasingly evident that pathological changes occurring in the various bodily organs and functional deviations from their normal activity produce symptoms which are not limited to the affected organ alone, but that these symptoms affect mental life as well. We are all aware of the various "states of mind" and emotional changes that accompany most diseases, i. e., pneumonia, rheumatism, cardiac conditions, tuberculosis, surgical abdomen, etc. In general, it is less well rec-

ognized by those not in direct contact with a large number of the mentally ill that psychotic conditions in turn produce extensive and appreciable changes in body metabolism, also impairment of the various anabolic and catabolic processes of the different organs and that as a result of these changes, there follows a diminution or increase of total activity of the different parts of the body. From contact with a large number of patients in a state institution for the mentally ill, one becomes readily impressed with some of the more extreme of these physical disorders such as occur in the so-called functional psychoses, chiefly so in the schizophrenic and manic-depressive groups. No attempt is made here to enter into a discussion of the mechanisms that produce stupor states, the severe depressions, cataleptic states, acute exhaustive states, etc., such as occur as part of the symptom complex of the various abnormal mental conditions. From the point of view of physical treatment, we are concerned with the extreme emaciation and loss of body weight, with postural abnormalities and contractures, with deformities, with impairment of locomotive function, and in general, with retarded physical activity and the results of bodily changes accompanying these psychoses. Abnormal output of psychic energy, diminution or overproduction of it, has its counterpart in the physical sphere; it follows also that the converse is true. Thus a vicious cycle is produced which intensifies existing physical and mental states. It is needless to say that the above interrelation between the psychic and physical phenomena of disease is equally applicable to the organic psychoses. To neglect, therefore, the physical side of mental illness is to retard recovery. We have at our disposal various agents which may be used to correct or eliminate, in part at least, the detrimental effects produced upon the body by these physical disturbances. These agents are grouped together under the term physical therapy.

Physical therapy as such came into prominence and acquired a legitimate place in medicine during the World War. It has, however, been in use long before the Christian era but until comparatively recently, its use was empiric. Nowadays, a more rational method of treatment is in vogue; this takes into consideration the suitability of the various therapeutic agents used to conform with

physiologic and anatomical principles and it also requires a proper understanding of the physics and chemistry of the agents involved. The Council of Physical Therapy of the American Medical Association states: "Physical therapy is intimately connected with body mechanics. Good body mechanics is associated with good functional health and poor body mechanics is usually present in poor functional health. The human body is a vastly more complicated machine than the modern automobile, but with much wider margins of safety. Nevertheless, it cannot be indefinitely subjected to continuing abnormal stresses and strains or to malignments of its essential parts without becoming less efficient and eventually permanently damaged. Its fuel must be adapted to its combustion demands and its waste products must be eliminated. If it is to function with least wear and tear, its complicated systems must function with the least friction and in the most perfect equilibrium; increased postural tonus induces increased fatigue. The first requisite in all forms of physical therapy is to seek the attainment of correct posture and of perfect body mechanics." The council also defines physical therapy as the treatment of disease by various non-medicinal and non-surgical means. It includes the use of heat, light, water, electricity, massage, exercise and climate as agents in such treatment; these to be used singly or in various combinations.

Physiological Effects of Heat and Cold

A brief discussion of the properties and physiological effects of these various agents seems appropriate. In discussing the value of water in its different forms as a means of therapy, Baruch says: "Enthusiasts had at one time built a system of practice called hydrotherapy upon the universal application of water in diseased conditions; while this fallacy has been demonstrated, the scientific physician with a proper understanding of the mechanisms of body structure and function can recognize that water may be placed in nearly all the categories of the materia medica." He lists for water and its judicious application the following attainable beneficial results: as a stimulant, sedative, tonic, diuretic, diaphoretic, emetic, purgative, aseptic, antipyretic, hypnotic, as a local anesthetic (Schleich method) and as a promotor of metabolism. From

the above, it can be seen that water in its various forms, i. e., liquid, gas or solid, and in temperatures desired and easily attainable, can be used advantageously to stimulate and effect a change in almost every bodily function. Some of its well-known applications in the treatment of mentally diseased patients are the sedative and continuous baths, the tonic baths in conjunction with the electric cabinet and various douches, the whirlpool baths, the sitz baths, the warm and cold wet packs, the local application of heat and cold, irrigations in various forms. By the intelligent use of these methods of treatment, sedation, stimulation, elimination, increase in body weight, increase in metabolism, improvement of circulation, hypnosis, amelioration of traumatic bone and joint conditions, relief of pain, relaxation or stimulation of muscular tissue and other additional benefits are frequently obtained. The results attained depend on the temperature of water used and its manner of application.

Moist heat, in general, has a sedative effect on the nervous system, causes relaxation of musculature, relieves muscle fatigue, causes peripheral capillary dilatation, by reflex action and vasomotor control relieves congestion in internal organs, increases respiration and elimination *via* the skin and kidneys, and induces sleep. It also causes temporary paralysis of the vasoconstrictor center and stimulation of the vasodilator center. Cold on the other hand, when applied locally or to the entire surface of the body, causes contraction of the small blood vessels of the skin and dilatation of the internal vessels, a sensation of chilliness, pallor and cooling of the skin. These effects of cold are temporary and last for a very brief period of time, varying from seconds to a minute or so. The beneficial results obtained from such cold applications depend entirely on the prompt reaction that follows after the initial cutaneous constriction and chilliness. Reaction is a defense mechanism against injury from the loss of heat. In this stage the peripheral small vessels are dilated, sensation of warmth, comfort and well being ensues, perspiration, fall of internal temperature and heating of the skin result. The use of the continuous baths at temperatures of 93° to 98° is based upon the primary effects of general heat applications as above indicated. The action

and reaction phenomena which follow the local application of cold have direct practical use in the employment of the wet pack and the various cold douches which are used in conjunction with the cabinet baths, the latter known as tonic or stimulative treatment. Briefly stated, following the use of the wet pack, sedation, hypnosis, elimination, and profuse perspiration result due to the flow of blood from the inner organs to the surface of the body and the consequent envelopment of the body in an atmosphere of warmed air which cannot escape. In tonic treatment, the cabinet bath (electrical lights, steam bath, etc.) prepares the skin for the subsequent applications of cold for the production of the desired "reaction" on the part of the body. The aim in tonic therapy is, of course, to bring about improved metabolic activity, redistribution of blood throughout the body, and increased function for the various bodily systems.

Physiological Effects of Light Therapy

Light therapy may be defined as the treatment of disease by means of light rays, particularly invisible light rays. It is well known that visible light when split by a prism ranges through the various colors; violet, indigo, blue, green, yellow, orange and red. Beyond the red end of the visible spectrum are the invisible infra-red rays and beyond the violet end of the visible spectrum are the invisible ultra-violet rays. It is doubtful that the visible rays of the spectrum have any special therapeutic action. The physiological results obtained by exposure of the body to light rays depends entirely on the specifiicity of action of the various invisible rays; the infra-red rays are heat producing while the ultra-violet rays produce chemical changes when they come in contact with the body. Various forms of carbon arc lamps, cold quartz lamps, tungsten and nickel arc lamps and others are now in use which produce the ultra-violet rays of desired wave lengths which are used in physiotherapy. Mayer summarizes the physiological effects produced by ultra-violet rays as follows:

1) They impair the growth of pathogenic and non-pathogenic bacteria as well as destroy them.

2) Cholesterol of skin is chemically activated by ultra-violet irradiation. Ergosterol, an impurity of skin cholesterol, is made

anti-rachitic by such irradiation. The increase in calcium and phosperous of the blood serum in rickets and tetany under ultra-violet radiation, is probably due to the increased calcium absorption.

3) Persistent increase in red blood cells and reticulocytes with no appreciable influence exerted on hemoglobin regeneration has occurred by massive exposure of animals from carbon and mercury arc lamps, so that ultra-violet rays may be a valuable method of treatment of anaemias in man.

4) Cell membranes and capillaries develop increased permeability on exposure to these rays so that there is an improved physiological action of the skin and that in general there follows improvement in physiologic processes throughout the body.

Goldberg believes that ultra-violet light has a beneficial effect on metabolism which on the whole is stimulated. Bachem lists in addition the following beneficial effects: 1. Locally: erythema, vasodilatation, pigmentation, blistering, tissue stimulation, germicidal and cytocidal effects, sterol activation; 2. Systemic: sympathetic nervous system stimulation or depression, increased assimilation and elimination, increased internal and gastric secretion, shortening of clotting time of blood and a lowering of blood pressure. He also lists in the same manner the physiologic effect of luminous heat and infra-red rays as obtained through the infra-red lamp: 1. Local effects: hyperemia, analgesia, antispasmodic, germicidal absorptive and nutritive effects; 2. Systemic: profuse perspiration, stimulation of metabolic processes, analgesia, lowering of blood pressure, increase in oxidizing power and general stimulation of tissues.

It follows, therefore, that a proper understanding of the properties of these rays and their correct application, always bearing in mind individual susceptibility and variability of reaction to their effects, often produces results which are a source of great satisfaction and comfort to the patient and what may be considered of secondary importance, a source of gratification to the personnel concerned in the administration of these treatments. Practical applications for light therapy in state institutions are found in the treatment of various skin conditions, anaemias, varicose ulcers,

local infective conditions, sluggish metabolic functioning, depressed states and others. To be more specific, when used singly or in combination with other physiotherapeutic and hydrotherapeutic measures, we have obtained many good results from the use of light therapy in the treatment of acne, psoriasis, erysipelas, conditions of tinea which have not yielded to local medicinal applications, secondary anaemias, other skin conditions, in diminished functional activity, in apathetic and depressed mental states, undernourishment, etc.

Physiological Effects of Electricity

Granger states there are five physiological effects produced by electricity; they are chemical, thermal, mechanical, psychical, and stimulative. It is not possible to go into a lengthy consideration of electrotherapeutics in a paper of this type. The psychical, chemical and stimulative physiologic properties of electric currents are obvious. From a practical point of view, we are interested in the thermic and mechanical characteristics of these currents. Granger states further: "Any tissue resistance to current flow is translated into heat. This thermal property is most marked in high frequency currents, especially in their diathermic manifestations. Whenever muscular contraction ensues due to electrical excitation mechanical action follows; the sinusoidal, the faradic, the interrupted galvanic, the static spark and the static wave current are examples of this class." Diathermy or internal heating promotes tissue drainage, also causes an influx of arterial blood with its nutritional value and increase in the leucocytes. Pain in deep seated areas may be, therefore, relieved by diatheramy and incidentally functional activity of the heated organs improved. The value of the various currents used in stimulating muscular contraction and increasing muscle tone in general is self-evident. In the treatment of various forms of paralysis, weak and hypotonic muscular conditions, muscular contractions, neuritic conditions, etc., the beneficial effects of the various stimulating currents used are well known.

A word might be added here as to the beneficial results obtained through the use of massage and gymnastics. In conjunction with the other physical agents used these serve to supplement physio-

therapeutic measures in general and enhance their value in the treatment of mechanically and physically impaired and diseased organs. Our department is fortunate in having the services of an experienced physical instructress who devotes a considerable part of her time to the correction of various postural defects and deformities of patients. She has daily classes during which corrective exercises, ordered for such patients by the physician, are systematically performed and directed. This work is facilitated by the use of various simple but effective forms of apparatus. Her contribution forms part of the general scheme of physical treatment and is coordinated with the activities of the rest of the personnel in the department.

In the above discussion an attempt has been made to enumerate but briefly some of the more prominent physiological effects of the more common physical agents used in physiotherapeutic and hydrotherapeutic methods of treatment. They apply to normal as well as abnormal anatomical conditions. We are concerned chiefly, from the point of view of this paper, with the beneficial results that can be obtained from these agents in the treatment of physical disorders occurring in or as part of mental illness. The aim of therapy in general is to approach the individual patient from all possible angles; to strengthen his assets, physical and mental, and to lessen or remove when possible, the strain on organs which are either inferior or have become a liability to the individual. This is of prime importance in adding to the patient's physical and mental comfort. In abnormal mental states, it is often noticed that patients are very likely to be preoccupied with different body organs and this tendency becomes more pronounced when there are definite physical handicaps resulting from trauma or from impaired activity due to pathological processes which are present elsewhere in the body. Hemiplegia, alcoholic polyneuritis, tabes dorsalis, the muscular hypertonicity of the encephalitic, numerous skin conditions, impaired activity of the extremities due to disease or trauma, painful joints and muscles, neuralgic and other allied conditions are met with rather frequently in psychotics; that these respond in the great majority of cases to physical methods of treatment is recognized. Patients often approach physicians asking

them for relief from the symptoms which arise in some of the conditions just named. Of no less importance, however, from a therapeutic point of view are the beneficial results that can be obtained from the use of these methods of treatment in the functional psychoses. To bring patients in a state of catatonia or in a stuporous or semi-stuporous state into affective contact with reality is one of the chief aims of therapy. Patients are frequently impressed with the various forms of physical apparatus used. In addition, the close contact that results between patient and personnel administering these measures over a long period of time arouse in them a feeling that something is being done for their welfare; he or she is the center of interest insofar as the particular procedure used affects the individual patient. When improvement or recovery occurs, it is a frequent experience to hear from patients that "hydro" or "physio" or the nurses in either of these departments were instrumental in bringing about their recoveries. One can therefore stress that psychological factors play no small part as a means of aiding both the physical and mental states in patients.

In this connection it might be appropriate to quote from a questionnaire sent by Steckel to a group of 44 recovered manic-depressive cases. The questionnaire sought to obtain their attitude on the numerous forms of treatment given them while in a state institution. Among the questions asked, question number 12 was: "What is your opinion of the hydrotherapeutic treatment?" Nine patients responded they had none, 13 described a positive beneficial result, 5 were indifferent in their replies, 3 were unfavorable and 4 did not answer. Steckel adds "We gather from this that hydro treatment did not make as much impression on the patients as we ordinarily would expect." But he includes some of the replies obtained as follows: "They were fine stimulating and invigorating," "They were fine—I wish I were in a position to take them now," "I think it was wonderful, much better than the continuous baths, a splendid influence and diversion. You have confidence that it is doing good, that something is being done for you." These replies need little comment, they are self-explanatory. In our experience, however, we find a larger percentage of patients who are quite favorably impressed by these measures. Space does not permit a

lengthy reproduction of patients' comments in that direction. It is no exaggeration to say that some patients resent discontinuation of either "hydro" or "physio", even after their administration is, in the opinion of those in charge, no longer necessary.

Gillespie and Henderson in speaking of the stupor states, say: "During all these stages of depression the physical health suffers greatly. The patient becomes weak, loses weight, has a poor appetite, a coated tongue, and constipation. The circulation is enfeebled and there is cyanosis, especially of the extremities. The chief physical changes are disorder of sleep and emaciation. These two symptoms are just as difficult to control in the manic as in the depressed case. Control of these two factors is the keynote of treatment particularly in the acute phases. It can be said that practically every case of acute or delirious excitement and every case of acute depression suffers from sleeplessness and from a disorder of appetite. One of the first signs of beginning improvement is an increase in the bodily weight, usually with a relish for food and improved sleep."

It is essential to treat the psychotic both from the mental and physical points of view. Frequently mental improvement is preceded by physical improvement and increase in general bodily function. The following cases are reported not because of the rather good results obtained with physical therapy, but because they demonstrate the interrelation between bodily well being and wholesome mental life.

Report of Cases

T. B., female, age 15 on admission, family history essentially negative, early childhood and pre-adolescence normal. Began to have menses at 14; these were regular and painless. Medical history was negative. Four weeks prior to hospitalization she was told that she had the grippe. The condition lasted a few days and subsequently she developed a state of agitation and she refused food, thus necessitating admission to a state institution. At the hospital she continued to be antagonistic, was difficult to manage, had delusional ideas of persecution and poisoning, required tube feeding and later developed states of catatonic stupor alternating

with periods of catatonic excitement. She had a stormy course during her early residence, with fever and a general toxic state. At the end of a month of intensive medical treatment the toxic symptoms disappeared but she remained uncooperative, negativistic and apathetic. During the next four months there was little improvement noticed; she was able to get out of bed, could walk only with assistance, her upper and lower extremities showed generalized weakness and loss of muscular coordination; she also developed a spasmodic torticolis. Neurological consultation at that time suggested a possible diagnosis of juvenile multiple sclerosis. She was then referred to the hydro- and physiotherapy department for treatments. General ultra-violet irradiation of body, perithermy and diathermy, with faradic massage to all extremities was prescribed every other day. Treatment continued for three months. Ward notes indicate that patient was showing some improvement physically and mentally during this period. Muscular incoordination and weakness upon walking became less prominent. At this stage stimulative hydrotherapy treatments were begun. Electric cabinet baths, circular douches, fan and jet douches followed by general body massage were administered daily. This combined treatment was continued for an additional period of four months. Her body weight, which was 68 pounds before this treatment was instituted, gradually increased; weakness and ataxia of legs progressively diminished. Patient became more cooperative, helped in ward routine, was well able to attend to all her dietary and hygienic needs. At this stage, her family insisted on her discharge from the hospital. A post-encephalitic condition with mental disturbance was considered, but the final diagnosis made was dementia præcox—catatonic type. At the time of her discharge she weighed 96½ pounds (a gain of 28½ pounds from the time treatment was begun); she walked without impediment and with a normal gait; she was considered improved mentally.

F. C., female, age on admission 20, family and early developmental history negative. Menses began at 11, were irregular and were accompanied by severe pains. Onset of mental disturbance was 14 months prior to hospitalization and the course of the psychosis was in the nature of alternating catatonic excitement and

stupor. Her condition showed little change after four months residence at the hospital. She lost weight, refused to eat, failed to respond to sedative treatment. She was then referred to the hydrotherapy department for tonic treatments. Her weight then was 83 pounds. Daily stimulative and tonic treatments and ultra-violet irradiation of body on alternate days were prescribed. Treatment continued over a period of four months. Ward notes indicate that there was progressive improvement in her condition, physically and mentally while under treatment, and she became more cooperative and gained weight, while excitement and stupor diminished by degrees. At the expiration of the treatment in our department patient weighed 126 pounds (a gain of 33 pounds in four months). Her menses were regular. She was paroled much improved with a diagnosis of dementia præcox—catatonic type.

H. C., female, age 16, family and early history essentially negative. At the age of eight years she had an acute attack of rheumatic fever and subsequently for a period of five to six years, she was under the care of a number of physicians for chronic cardiovalvular disease, mitral stenosis and regurgitation. Three months prior to coming to the institution, she had an attack of "hysterics". She was restless and could not sleep, expressed fear of doctors and needles. In that interval she had been at several of the local hospitals and the diagnosis of chorea was made. At the time of admission to our hospital she showed tremors of the right upper and lower extremities; these were choreiform in type at times. She was shy, retiring, appeared under tension, cried frequently. She was unable to walk and on attempt to do so, she pitched forward and also dragged her feet. Neurological consultation suggested a diagnosis of hysteria. Her emotional reactions varied between periods of weeping and laughing or states of anxiety and depression. A month after her admission she was referred to the physiotherapy department. Examination revealed no cardiac decompensation in any form. Daily tonic and stimulative treatments were prescribed. Because of her valvular lesions, the temperature and pressure of the water, and the patient's reaction to treatment were carefully watched. In addition, perithermy, diathermy, tonic ultra-violet and faradic massage treatments every other day were

ordered. In cooperation with the physical training department, special exercises were prescribed for her. The nurses and attendants on the wards were instructed to help the patient in every possible way and to encourage her to walk by herself or with their assistance. Her progress was slow, but she gradually gained in weight, showed some improvement mentally, but tremors of the right side of the body continued. After four months of treatment, she was able to walk with support of others or with the aid of a chair. At this stage she became despondent, assumed a hopeless attitude, wept frequently and said she would never again be able to skate or walk like other girls. She suffered several minor injuries as a result of falls due to incoordination of muscles and inability to walk without support. After a rest period of several weeks, treatments above indicated were again instituted, special attention was given to the improvement of her walking by postural and training exercises. Patient was at first poorly cooperative, but gradually developed a liking for the exercises and the "hydro" and "physio". After an additional period of treatment of five months duration, she was paroled with a diagnosis of psychoneurosis, conversion hysteria. At time of parole, patient could walk in a normal manner, without any difficulties whatever; the tremors had disappeared completely, her mental state was one of cheerfulness and friendliness. When asked at staff meeting what in her opinion helped her to get well, her first reply was "the nurse in hydro and all the treatments I got." Her blood count which showed 3,640,000 red blood cells and 72 per cent hemoglobin at the beginning of treatment, was now 4,510,000 red cells, 82 per cent hemoglobin.

One can also cite numerous cases of delirious and manic states with hyperactivity and excitement that have responded favorably to the use of continuous baths and wet packs. Their use is based on definite physiological principles. Oftentimes, in long-standing manic or allied states, sedatives of various sorts after prolonged use lose their efficacy as hypnotics and fail to control psychomotor hyperactivity. The sedative baths and wet packs calm and quiet such patients. Because of the impression patients develop that the wet pack is a form of restraint and "punishment" we use it less

often than the continuous baths. Probably, the quiet and absence of light in the room in which the baths are administered, the diminution of external stimuli affecting the patient, and in addition the general relaxation of the body that occurs while patients are in the tub, all contribute to the causation of a mild fatigue and the production of a soothing effect upon the central nervous system. After several hours of these baths, patients frequently fall asleep and remain so for a number of hours. This quiescent state that follows such treatments spares the organism from the excessive output of psychic and physical energy, temporarily at least. The baths, therefore, after repeated administration, tend to conserve the body energy in general and prevent or diminish wasting of tissues and in many cases help to accelerate the rate of mental recovery.

It is important to repeat that a proper comprehension of the physiologic effects of the agents used in physical therapy be understood. These effects vary with the quantitative administration of each agent used; they vary also with the duration of exposure of the organ and body to each agent. In the case of water, the temperature is an important factor. A change of two or three degrees in temperature may mean the difference between positive and negative results. The intensity and degree of treatment should, of course, bear a definite relation to the needs of the patient and to the individual's physiological reaction to each measure used. Optimum benefits are obtained only by adapting each agent to individual requirements. Too often negative or harmful results are obtained because of an improper understand of the principles involved in treatment or because of improper application or combination of the agents at our disposal. Certain neurological and traumatic conditions respond only to physical methods of treatment.

Summary

At our institution, we average 2,700 to 3,200 treatments monthly; this number includes physiotherapeutic and hydrotherapeutic treatments, but does not include the several measures of hydrotherapy employed on the wards. It has been the purpose of this discussion to indicate the value of physical treatments in certain types of cases

and to base such treatment on definite physiological concepts. Physical therapy should be considered one and only one of the many forms of therapy to be instituted in the treatment of mental diseases. Certain types of cases respond more readily to physical rather than psychotherapeutic measures. An effort is made to treat the physical manifestations of mental disease whenever possible. There is no longer any question that physical well being plays an important role in the maintenance of proper mental equilibrium. Not all of our cases treated by this means show phenomenal results; that some patients recover spontaneously with little or no therapy of any sort is well known. But to assume a negative attitude in the treatment of any form of illness, physical or mental, particularly the physical aspects that form part of a mental syndrome, is to be unscientific and not in accord with the trend of the day. Patients should be given the advantages of all means of treatment available to the physician. The many cases where manifest benefits result from physiotherapeutic and hydrotherapeutic measures more than compensate for the lesser number of failures obtained. Physical therapy, therefore, supplements to an appreciable degree the other forms of treatment used in the care of the mentally sick and frequently an improved physical condition is the precursor of mental improvement.

Conclusions

Physiotherapy and hydrotherapy are valuable aids in the treatment of mental illness. They should be considered as only one of the many forms of therapy that may be used. In addition to the benefits derived from their use in the treatment of specific physical conditions, they are of value also in bringing about improvement in general bodily functions. Properly used they serve to stimulate or depress the central nervous system, as required. The psychological factor associated with their use often plays an important role in hastening mental recovery. The correction of physical disturbances and abnormalities, and the improvement of psychic states that can be obtained through their use often are preliminary steps in the mental improvement that may follow. Optimum results in such treatment can be obtained only with proper knowl-

edge of the physiologic effects of the various agents used and by having a reasonable understanding of body mechanics and function.

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BASAL METABOLISM IN MANIC-DEPRESSIVE PSYCHOSES

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The estimation of basal metabolism in manic-depressive psychoses is helpful in detecting somatic disorders, particularly of endocrine origin, whose existence may have an important bearing on the etiology and treatment of the mental condition. It is useful also in evaluating the influence of emotion on the metabolic rate, from a purely physiological point of interest.

Whether or not the oxidative activities of the body are influenced by an emotional psychosis has been the subject of much controversy. Grafe[1] and Bornstein[2] were among the first to investigate this problem and contended that manic reactions had no appreciable effect on the basal metabolism. This contention was supported by the researches of later writers. Thus Fischer,[3, 4, 5] in a small group of manic-depressive cases, found uniformly normal values, and observed that basal metabolism might be used as a means of differentiating between dementia præcox, in which there was a lowering of the basal metabolic rate, and manic-depressive psychosis, in which metabolism was normal. Walker,[6] Janowska,[7, 8] Whitehorn and Tillotson,[9] and Baumann[10] were similarly of the opinion that in the affective psychoses the basal metabolism fell within physiological limits.

In contrast to these negative findings, there have been reported definite deviations from the normal in the metabolism of manic-depressives.

Among the first researches reporting abnormalities of metabolism were those of Bowman and his co-workers,[11, 12] who revealed a distinct tendency toward low readings. The existence of pathologically low basal metabolisms in manic-depressive psychoses was further substantiated by the investigations of Gibbs and Lemcke,[13] Farr,[14] Schou,[15] Badonnel,[16] Zeckel and Posthumus,[17] Massaut,[18] Lauzier,[19] and Langfeldt.[20] The latter writer, contradicting Fischer (*q. v.*), contended that the basal metabolism could not be used as a differentiating point between manic-depressive pyschosis and dementia præcox since low rates existed in both conditions.

Table I is a compilation of reported basal metabolic determinations in manic-depressives. A casual analysis reveals a tremendous disparity in the reported findings. Even in those cases where a marked tendency to low readings has been claimed, it is seen that the majority of tests fall within normal limits. It is evident also that in some cases there is actually an elevation of metabolism.

It is deplorable that in a number of researches the material has been so inadequately handled as to vitiate a proper evaluation of the results obtained. In many instances a single basal metabolism is considered a representative determination and no attempt has been made to tabulate the metabolic variations during the evolution of the psychosis. There is furthermore a general acceptance of average predicition values as normal and a total disregard of the metabolic rate of the individual after restoration to his normal mental state. In most cases information is lacking regarding the emotional, psychomotor, and nutritional status at the time of the test, and there is no indication of the type of mental reaction, the depth of the psychosis, state of muscular tonus, nor of existent endocrine, vegetative and other physical disturbances. The absence of this correlative information would seem to make the metabolic results barren and unconvincing.

A review of the literature on the effect of emotion on basal metabolism shows it to be similarly replete with apparent contradictions.

In normal individuals emotional states, especially apprehension and fear, are said to have a profoundly stimulating effect on metabolism,[21] due probably to the calorigenic action of liberated adrenalin,[22, 23, 24, 25] the rise in metabolism being proportionate to the intensity of the emotion.[26]

Experimental attempts to excite emotion artificially and to measure the resulting change of metabolism have yielded somewhat conflicting results. The most notable experiments are those in which emotional states have been induced by suggestion during hypnosis. Grafe and his co-workers[27, 28] found that while in some cases metabolism was uninfluenced by emotion, in other cases there was an increase in metabolic rate ranging from 5 to 25 per cent, without a corresponding increase in respiration or heart action. Whitehorn, Lundholm, and Gardner[29] discovered that the moods of depression

and elation hypnotically induced had no effect on the basal metabolism, whereas the moods of anxiety or apprehension hypnotically induced had a markedly elevating effect.

TABLE I. REPORTED BASAL METABOLISMS IN MANIC-DEPRESSIVE PSYCHOSES

Author	Total number of cases reported	Number of cases above +10%	Number of cases between +10% and −10%	Number of cases below −10%
Fischer[3]	15	0	15	0
Fischer[5]	9	0	9	0
Janowska[8]	16	4	11	1
Whitehorn and Tillotson[9]	17	2	14	1
Baumann[10]	12	0	11	1
Bowman and Grabfield[11]	6	3	2	1
Bowman and Fry[12]	25	3	16	6
Gibbs and Lemcke[13]	15	2	8	5
Farr[14]	38	3	26	9
Schou[15]	34	0	21	13
Badonnel[16]	6	0	1	5
Zeckel and Posthumus[17]	13	1	5	7
Lauzier[19]	6	2	2	2
Total	212	20	141	51

That metabolism may be depressed instead of elevated through the influence of emotion was demonstrated by Crile[30] in rabbits frightened by dogs. The work of Deutsch[31] is noteworthy in this reference in bringing out the fact that collapse due to extreme emotion is apt to cause a drastic fall in basal metabolism.

The associated mood abnormalities of psychoses would appear to offer a convenient means of investigating the problem of metabo-

lism in emotional states. That mental disturbances are capable of disrupting the biochemical equilibrium of the body was observed by Gordon,[32] who reported in psychoses with intense emotional changes the existence of hyperglycemia and increased adrenalin output. It is not unreasonable therefore to anticipate a change of metabolism in the manic-depressive psychoses, in which pathological mood disturbances notoriously prevail.

Changes of metabolism have actually been reported by Henry,[33] who discovered that acceleration of basal metabolism occurred in elated, over-active and over-talkative patients, as well as in apprehensive, tense and agitated patients, unless counteracted by depression. Retardation of metabolism occurred in depressed, under-active and under-talkative patients. Henry concluded that basal metabolism could be altered pathologically by intense emotions, and conjectured that the so-called normal variation in metabolic rate was due to different emotional states presented by the same person.

A detailed study of emotional changes in manic-depressive psychoses was conducted by Janowska.[5] The basal metabolism was first tested, following which the patient was told particularly unpleasant news. Feelings of anxiety and occasionally states of desperation, irritation, and rage resulted during which the metabolism was again determined. After the crisis had passed, the basal metabolic rate was again obtained. The conclusions reached were that metabolism was increased in states of fright, desperation and rage, as well as in pathological depressions; that reactions were more evident if there was an increased activity of the thyroid gland; and that the change in metabolism under the influence of emotion was greater in depressed than in normal cases.

On the other hand Landis,[34] after reviewing the literature on the subject, and as a result of his own experiments, decided that an altered emotional state did not necessarily have an effect on the basal metabolism, and concluded that manic-depressive psychosis, with its supposedly altered emotional content, might or might not affect the metabolic rate.

In anxious, agitated states one would ordinarily expect an increase of metabolism. Nevertheless there is evidence that the me-

tabolism may not be affected in this manner. Thus Carey and Brumfield[35] found a low metabolic rate in 28 anxious and agitated psychoneurotics; and Gibbs and Lemcke[18] reported normal metabolisms in two depressed and agitated cases who cooperated satisfactorily. Obregia[36] and Padeano[37] denied that the basal metabolic rate was influenced by psychomotor agitation. The latter writer found an approximately equal percentage of normal, increased, and decreased readings for calm as well as for agitated cases. Extreme psychomotor agitation necessitating immobilization of the subject seemed to increase the metabolism merely because of the muscular efforts of the patient to free himself and because of the increased amplitude of the respiratory movements.

The conclusions that we are therefore forced to adopt from the work which has been done on the subject of basal metabolism in emotional states is that emotion potentially may increase or decrease or may have no effect on the metabolic rate.

The Present Study

Repeated basal metabolic determinations were performed in 105 manic-depressive patients for the purpose of investigating as completely as possible the following problems: (1) How does the basal metabolism during the active phase of a manic-depressive psychosis vary from prevailing standards for normal metabolism? (2) What fluctuations, if any, occur during the course of the psychosis? (3) Is there any appreciable difference in metabolism between manic and depressed phases of the psychosis? (4) Does the basal metabolic rate bear any relation to the severity of the psychosis? (5) How does the basal metabolism, following the recovery from the psychosis, vary from the metabolism existing during the psychosis? (6) What are the effects of psychomotor agitation or retardation on the metabolic rate? (7) How do emotions such as anxiety, elation and depression influence the basal metabolism? (8) What effects have abnormalities in muscle tonus, and nutritional and physical disturbances on the validity of the metabolic readings?

The patients selected for study were those residing on the female reception service at the Kings Park State Hospital. Only benign emotional cases in which the diagnosis of manic-depressive psycho-

sis was obvious were considered. Excluded from the group were all cases exhibiting malignant features.

The apparatus used was a Sanborn Graphic basal metabolism machine, in which the metabolism is measured indirectly by determining the oxygen consumption of the body on the basis of a respiratory quotient of .82 and the assumption that 4.825 calories of heat are produced by the body for each liter of oxygen utilized.[38] Under ordinary conditions the error involved by this method is said to be rarely greater than two per cent. The standards used were the Aub-DuBois (Sage Institute) normals. The machine was tested at frequent intervals for circulation, leakage, carbon-dioxide removal, and correctness of timing. The thermometer on the apparatus and the metabolism barometer were similarly checked. In addition a normal subject was tested regularly to check on the accuracy of the machine.

Only patients conforming with the standard requirements for basal metabolic tests were tested. A 14-hour fast and an 8-hour rest period in bed on the evening before the test were imposed. Because of the effect they might have on the readings, sedatives[39] were avoided for several days preceding the determinations. The patients were obliged to walk down a flight of stairs to the basement where the apparatus was kept, but since a further rest period of one-half to one hour was enforced prior to the test, this muscular activity was not considered significant. The patients were comfortably clothed, the room temperature was normal, and there were no drafts. Noises and other disturbing influences were absent.

To obtain a uniformity of technique all metabolic determinations were conducted by myself. No difficulty was experienced in testing the patients except in cases of violently disturbed manic patients who refused to remain quiet during the test. By means of constant reassurance most moderately hyperactive patients remained sufficiently relaxed for satisfactory determinations. The majority of depressed and agitated patients cooperated satisfactorily. Determinations complicated by muscular activity on the part of the patient were discarded. However, isolated minor muscular movements, which Benedict[40] and Lefevre[41] have shown insignificant, were not considered important. Other unsatisfactory determina-

tions were those during which the patient laughed, talked, or purposely forced respiration. A careful watch was kept for leaks due to poorly adjusted noseclip and mouthpiece.

Each test consisted of at least two consecutive determinations. Where there was a difference of more than five or six per cent between the two readings, a third determination was obtained. At the time of the test the patient's temperature, pulse and blood pressure were recorded. Patients with fever were, of course, not tested. The patient's general physical and mental condition were tabulated at the time of the test, and the psychomotor and emotional condition recorded. The objective evidences of emotion prior and subsquent to the test, and the patient's own account of her feelings during the test, constituted the data from which the emotional status was estimated.

The group of 105 manic-depressive patients consisted of 45 manic cases, 54 depressed cases, 5 mixed manic cases, and 1 circular manic case. During the course of study 57 patients recovered, 31 patients improved, 14 patients remained unimproved, and 3 patients died from intercurrent illness. Eleven patients who had recovered and had been discharged or paroled were readmitted, and of this group two patients recovered, three patients improved, five remained unimproved, and one patient died.

Basal Metabolisms During the Active Psychosis

Figure 1 represents the frequency distribution of the readings in the entire series of 441 tests taken during the active stages of the psychoses. The black area represents readings within the generally accepted normal range of +10 per cent and —10 per cent. The largest number of readings, 68.7 per cent, fell within this normal area. The unshaded areas contain the abnormal readings, 8.6 per cent of these being pathologically high, and 22.7 per cent pathologically low.

The manic group of patients, as shown in Figure 2, demonstrated the following dispersion of readings: 67.9 per cent within the range of +10 per cent and —10 per cent, 12.8 per cent pathologically elevated, and 19.3 per cent pathologically depressed.

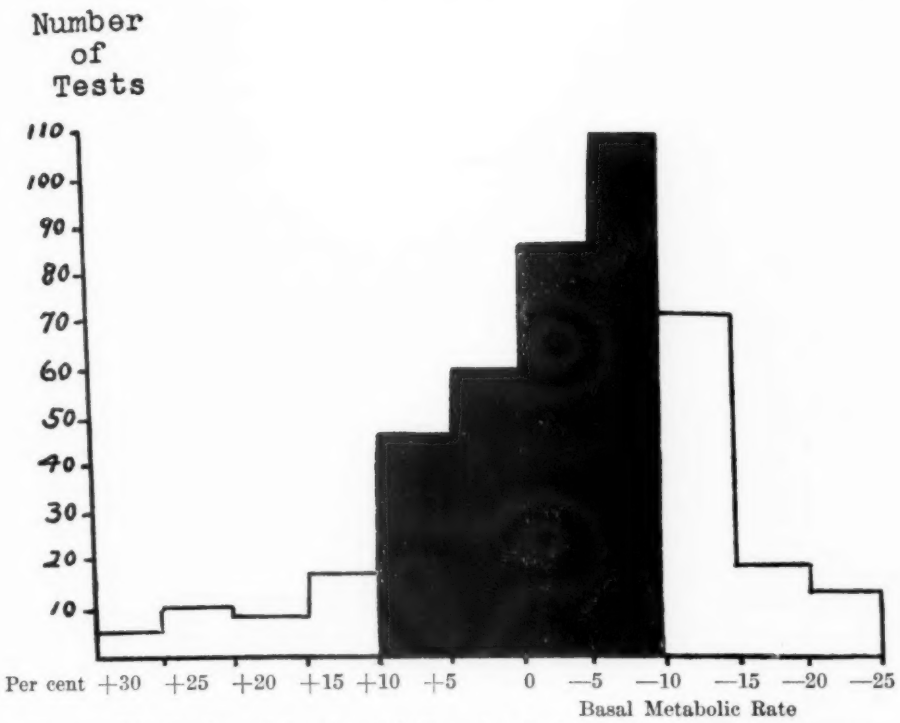

Fig. 1. Distribution of basal metabolic rates during active psychosis—all cases
Total number of metabolic tests—441
The unshaded areas represent abnormal readings

In the depressed group, illustrated by Figure 3, 70 per cent of the readings were normal, 4 per cent high, and 26 per cent low.

The 31 basal metabolic tests conducted in the five mixed manic patients revealed 20 tests within normal limits, 5 tests with high readings, and 6 tests with low readings. The circular manic patient demonstrated 3 tests with normal rates and 3 tests with abnormally low rates.

It is obvious, therefore, that while the majority of basal metabolic rates were within normal limits in the entire series of cases, a greater number of abnormal readings were obtained than one would expect in a similar group of "normal" individuals. The distribution of readings was slightly more uniform in the manic than in the depressed group, and in the former group there was relatively a greater number of elevated readings than in the latter

group. There was a general tendency toward minus readings, especially pronounced in the depressed cases. Pathologically low metabolic rates occurred rather frequently in both manic and depressed groups, but a relatively greater percentage of low readings prevailed in the depressed patients.

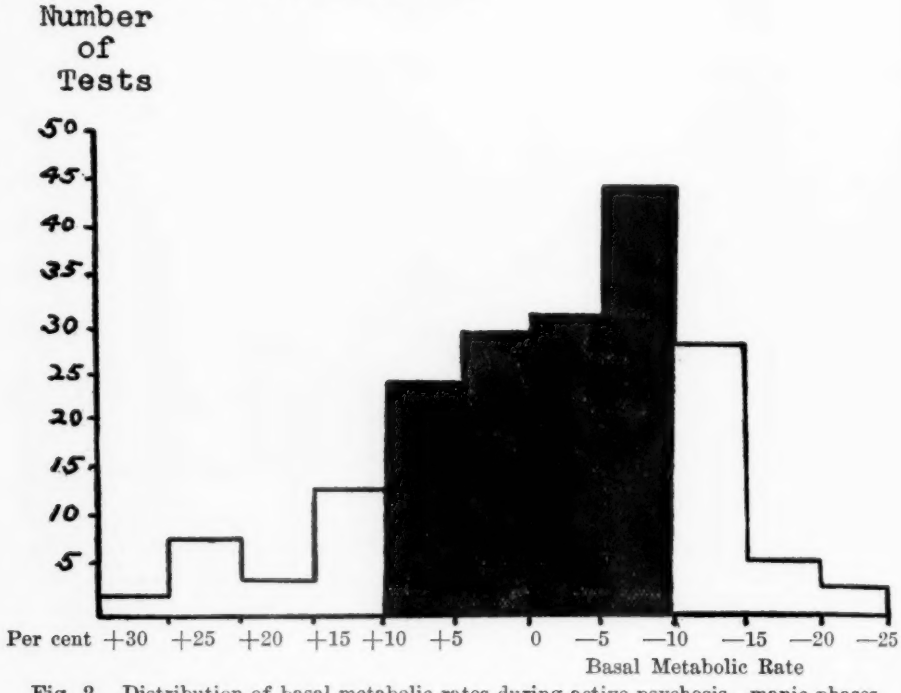

Fig. 2. Distribution of basal metabolic rates during active psychosis—manic phases
Total number of metabolic tests—187
The unshaded areas represent abnormal readings

Metabolic Fluctuations During the Course of the Psychoses

Under normal conditions the basal metabolism, like the temperature, pulse rate, and blood pressure, is fairly constant for the individual. Variations nevertheless do occur from day to day, even hourly, although Magnus-Levy,[42] Benedict and Carpenter,[43] Zuntz and Loewy[44] have shown that the deviations from the average are rarely more than 10 per cent.

Basal metabolisms obtained at various stages during the psychosis in the present study revealed in many cases variations over a wider range than is considered normal.

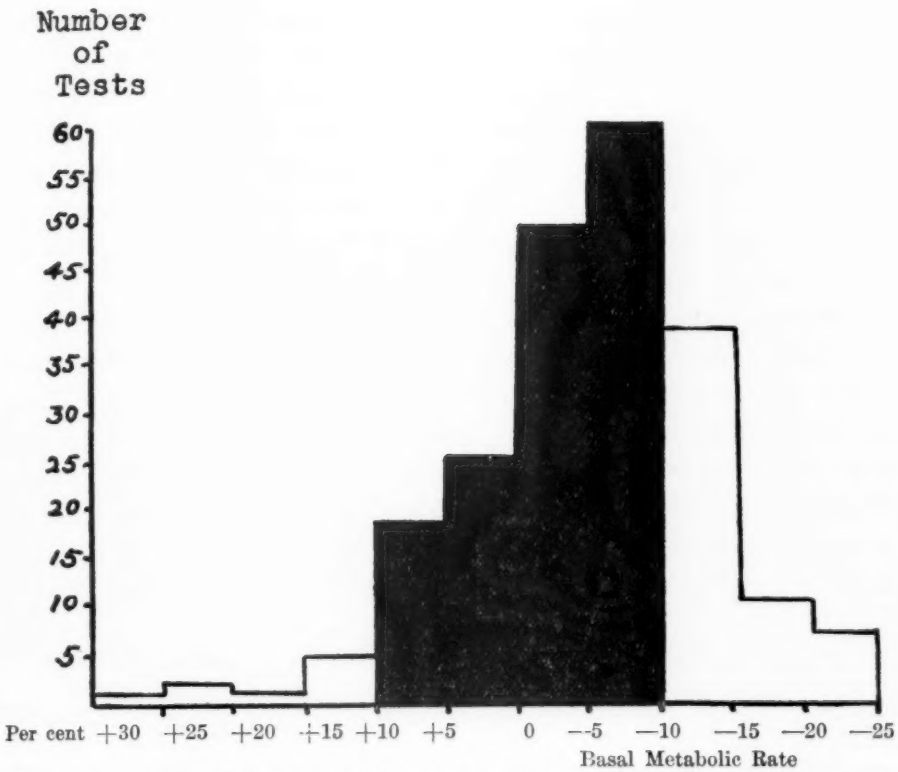

Fig. 3. Distribution of basal metabolic rates during active psychosis—depressed phases
Total number of metabolic tests—223
The unshaded areas represent abnormal readings

Changes in the depth of the psychotic reaction had no constant or sustained action on the metabolic rate. Similarly no definite influences on metabolism could be attributed to either mild or marked improvement in the mental condition, in many cases there appearing to be no change in metabolic rate, but in some instances an elevation and in others a depression of metabolism was associated.

Effects of Emotion, Agitation and Retardation on Metabolism

One of the most outstanding observations in the group of patients studied was the minimal effect of states of elation and depression on the basal metabolism. This was best illustrated in

seven cases in which there were phasic changes in emotional reaction, from elation to depression or vice versa. In all of these cases there was no pathological variation in metabolism. The fact that the mean metabolic rate tended to be higher in the manic than in the depressed patients was not believed due to emotional influences, but rather to associated muscular disturbances. In the manic series hyperactivity and elation were more commonly associated with mild muscular movements and increases of muscle tension than in the depressed series. In those depressed cases where muscle tension was increased or where tremors or mild muscular movements existed, the basal metabolism was abnormally elevated regardless of the depth of depression. The fact that reactions of anxiety and fear are frequently accompanied by muscular disturbances may similarly explain the associated high readings reported in these states. In relatively few cases was an increased adrenalin output believed provocative of rises in metabolism, although it was difficult to establish definitely this fact apart from observing the absence of noteworthy changes in pulse rate and blood pressure.

Psychomotor agitation unaccompanied by gross muscular disturbances had no discernible effect on the metabolic rate. Where an elevation of metabolism was present there was almost inevitably associated some muscular involvement. Psychomotor retardation similarly had no characteristic influence on the readings, except where muscle tonus was extraordinarily diminished as in the stuporous cases.

Effect of Mental Recovery on Basal Metabolism

The basal metabolism of the psychotic patient upon mental recovery presumably would be a better indication of his true metabolic rate than average prediction standards. A comparison of the metabolic rate during the active psychosis with the metabolism upon recovery might perhaps indicate the effect of the psychosis on metabolism. Table II is a comparison of the basal metabolic rates during the active psychosis with the rate upon recovery.

TABLE II. COMPARISON OF METABOLIC RATES DURING THE PSYCHOSIS AND UPON RECOVERY

Case number	Diagnosis	Range variation BMR in psychosis, per cent	Mean BMR, in psychosis, per cent	Mean BMR, in recovery, per cent
1	manic	— 8.6 to —13.0	—10.8	— 6.3
2	mixed	+18.2 to —10.6	— 1.7	— 0.8
5	manic	+29.1 to — 4.7	+14.6	— 7.2
6	manic	—15.9 to —22.3	—19.2	—23.8
10	manic	+14.7 to — 3.5	+ 2.4	— 2.9
12	depressed	+ 2.0 to — 6.7	— 3.6	— 8.2
13	manic	+ 9.7 to —14.7	— 4.2	— 8.4
15	manic	+12.2 to —14.6	— 4.9	— 7.7
17	manic	+18.1 to —14.6	— 4.5	— 4.6
18	manic	+10.3 to — 8.3	+ 2.9	— 7.9
20	depressed	+ 2.1 to —13.2	— 6.9	+ 8.3
21	manic	+11.6 to + 4.1	+ 7.9	+ 1.3
22	depressed	0 to —18.2	—12.9	— 6.4
23	manic	+ 3.5 to — 4.3	— 0.6	+ 8.1
25	manic	+12.7 to + 4.8	+ 8.1	+ 0.2
26	manic	+ 6.2 to —14.7	— 5.2	—10.1
27	depressed	+ 7.9 to + 3.1	+ 5.6	+ 0.3
28	manic	— 1.8 to —18.3	— 9.8	+ 6.8
29	manic	+ 5.0 to — 7.4	+ 0.7	+12.1
31	depressed	—14.1 to —22.3	—17.8	—18.2
32	depressed	+22.7 to + 3.8	+10.9	+ 0.1
33	manic	+22.8 to —11.5	+ 6.5	— 0.7
34	depressed	— 2.1 to —14.6	— 9.7	— 5.2
35	depressed	+ 5.2 to — 1.7	+ 2.4	— 8.9
36	manic	+24.1 to — 6.3	+ 6.4	+ 5.2
40	manic	+ 5.2 to —12.7	— 0.5	+11.4
41	manic	+12.6 to — 2.3	+ 6.9	— 5.9
42	manic	+14.7 to + 3.5	+ 8.5	+ 6.5
43	depressed	— 3.4 to — 7.8	— 5.6	+ 5.5

TABLE II. COMPARISON OF METABOLIC RATES DURING THE PSYCHOSIS AND UPON RECOVERY—(*Concluded*)

Case number	Diagnosis	Range variation BMR in psychosis, per cent	Mean BMR, in psychosis, per cent	Mean BMR, in recovery, per cent
44	manic	— 2.9 to —11.6	— 7.0	— 0.1
48	depressed	— 2.1 to — 8.6	— 6.0	— 3.9
50	manic	+ 3.2 to — 8.1	— 0.8	+ 5.3
51	depressed	+ 6.3 to —18.6	— 6.9	+11.6
52	depressed	+ 7.3 to + 4.0	+ 5.6	+ 1.6
54	manic	—10.1 to —13.2	—11.6	— 8.6
55	depressed	—12.9 to —16.5	—14.7	— 4.0
59	depressed	—12.1 to —16.1	—13.2	— 4.3
60	manic	+12.3 to —11.3	— 2.8	+ 6.1
62	depressed	— 3.2 to —21.8	—11.5	— 8.1
63	depressed	+22.0 to — 3.0	+ 5.6	— 7.2
65	depressed	+ 9.2 to — 9.4	+ 2.1	— 8.6
66	depressed	+ 1.2 to —11.4	— 5.9	— 3.5
67	manic	+ 1.3 to — 5.0	— 2.6	— 2.9
69	depressed	— 3.7 to — 9.0	— 7.1	— 6.2
70	manic	— 5.3 to —10.2	— 7.6	— 6.5
71	depressed	— 3.5 to — 9.0	— 7.0	— 0.6
72	manic	— 5.9 to — 7.1	— 6.5	— 2.0
76	depressed	+ 3.6 to — 2.1	+ 0.7	— 7.5
78	depressed	— 7.2 to — 8.5	— 7.9	— 5.6
80	manic	+ 3.8 to — 7.4	— 3.4	+ 2.6
81	depressed	—11.6 to —23.6	—17.2	—16.3
85	manic	+12.3 to —11.8	+ 3.1	+ 1.0
88	manic	+ 9.0 to — 8.6	— 1.9	+ 5.8
91	manic	— 4.3 to — 6.1	— 4.9	+ 1.9
95	depressed	— 2.0 to — 7.3	— 5.3	—10.6
96	depressed	+32.2 to —14.2	+ 8.2	+20.6
100	manic	— 8.7 to —16.1	—12.3	— 6.4

Although individual tests showed numerous abnormal readings, mean metabolic rates were abnormal in only 12 patients. The cases fell roughly into the following groups: First, those in which all metabolic tests during the psychosis yielded normal readings; second, those in which at least one test was elevated; third, those in which at least one test was low; and fourth, those in which both pathologically low and high rates were obtained. In the first group there were 20 patients, 18 of whom demonstrated normal metabolic rates upon recovery, 1 an increased rate, and 1 a decreased rate. In the second group of 11 patients, there were 10 cases in whom the recovery metabolism was normal, and 1 case in whom there was no change in metabolism. There were 20 patients in the third group, 14 of whom showed normal metabolisms on recovery, 2 an increased rate, and 4 no change. In the fourth group there were 6 patients, all of whom demonstrated normal rates upon recovery.

Factors of Physical Illness and Nutrition

Approximately 13 patients suffered from an associated physical illness, the various diagnoses being hypertension, emphysema, arteriosclerosis, mitral regurgitation, carcinoma of the uterus, hypertrophic arthritis, cardiac arrhythmia, ulcerative colitis and sciatic neuralgia, hypertension and hypertensive heart disease. Except perhaps for one case who demonstrated a terminal cardiac decompensation, the basal metabolic rates were not believed significantly affected by the physical illness.

Objective evidence of endocrine disease was lacking in all except five cases. The first, who demonstrated constant low basal metabolisms, had had a thyroidectomy performed some years before for an exophthalmic goitre, and apparently was suffering from a hypothyroid condition. Two other cases showed physical signs of hypothyroidism along with lowered metabolic rates. The fourth case demonstrated a girdle obesity and male hair distribution, but the basal metabolism was normal. The fifth patient had the physical stigmata of acromegaly, but there were no abnormalities in the basal metabolism.

Although undernutrition occurred in 20 patients of the group, basal metabolisms were depressed in only eight cases. In five cases

the readings were normal, and in seven cases they were actually elevated. It is interesting to speculate that in those undernourished patients with normal or elevated metabolic rates, factors which increased metabolism were coexistent, although it must be frankly admitted that in most instances such factors were not discernible. In five patients in whom metabolism was reduced, presumably on the basis of undernutrition, mental improvement or recovery was associated with a rise in metabolism; and in each case a gain in weight and improved nutritional condition was present. Eighteen of the patients were obese; but the condition of adiposity itself appeared to have no influence on the basal metabolism.

Discussion

In attempting to interpret the results obtained in the present study, it may be expedient to discuss in brief the factors which govern and regulate the basal metabolism of the body. It must be confessed, however, that our present knowledge of metabolic processes is relatively limited and that we are still ignorant of many important metabolic determinants.

Basal metabolism is the measure of the basal rate of oxidation in the body—the measure of the minimum chemical and physical changes compatible with life. Twenty-five per cent of the total basal metabolism, according to Krogh,[45] is accounted for by the activities of various organs of the body, and 75 per cent of the total heat produced under basal conditions is derived from cellular oxidation. The digestive tube is said to account for one-fifth of the metabolism and the muscular system for one-third; the remainder is accredited to the other tissues of the body.

The evaluation of any single basal metabolic rate involves a consideration of associated factors which may have stimulated or depressed the metabolism. Paradoxically several conditions may coexist which may simultaneously raise or lower the metabolic rate. The rate itself, therefore, is not significant of any single condition, but is merely the resultant of a number of complex factors which have varying effects on the oxidative processes.

There are four glands of internal secretion which influence the metabolic rate—namely, the thyroid, suprarenals, gonads, and ante-

rior pituitary. The principal autacoid is thyroxin, which has a slow, regular and sustained action on metabolism. Total extirpation of the thyroid gland causes a fall in metabolism of approximately 40 per cent. Overactivity of the thyroid causes a tremendous rise in metabolic rate. The suprarenal glands also have a powerful metabolic action. Adrenalin acts independent of thyroxin and its effects are immediate, irregular, and unsustained. Extirpation of the adrenals has been shown to cause a considerable depression of metabolism.[46, 47] The effects of gonadal and pituitary secretions are less definite. Removal of the gonads is often associated with a fall in metabolic rate.[48, 49] Korenchevski[50] suggests the metabolic interrelation of the gonads with the thyroid gland. The exact mode of operation is still somewhat problematic. The metabolic activities of the anterior pituitary have within recent years been thoroughly explored and it has been established that the gland is related to the thyroid and suprarenals through thyrotropic and interrenotropic hormones.

Other important factors in metabolism are muscle tonus and the nutritional status of the individual.

Muscle tone, according to DuBois,[51] is responsible for much of the basal metabolism. Clinically it is often observed that increases of muscle tonus are associated with elevations in metabolism.[52] In conditions of marked muscular relaxation, as in sleep, the basal metabolism drops below normal limits. Due to the active protoplasmic mass involved other muscular disturbances may profoundly affect the basal metabolism. The influence of muscle tremors on metabolism has been pointed out by Grafe[53] and Magnus-Levy,[54] and muscular contractions are known to raise the metabolic rate in proportion to the degree of muscular activity.

The effects of nutrition and previous diet on basal metabolism are fairly well established. Lusk[55] believes that undernutrition as a factor in itself may reduce the basal rate by as much as one-third. Starvation has a depressing influence on metabolism but even a low caloric or low protein diet may have the same effect.[56, 57, 58] Furthermore a drastic loss of weight is generally accompanied by a fall in metabolism.

It is important to realize that the basal metabolism is a labora-

tory test and as such is subject to many limitations. A number of variables are always present, such as mechanical errors, technical errors, and errors due to variations in the clinical condition of the patient at the time of the test. With technical competence, errors due to mechanical sources and errors of technique may be reduced to negligible proportions.

By far the most potent source of errors is in the patient himself. In manic-depressive conditions such errors may be considerable since a true basal state is frequently difficult to achieve. Unless carefully watched, hyperactive patients may successfully evade the preliminary rest requirements, or manage to obtain and imbibe food on the morning of the test. Uncooperativeness on the part of the patient during the test, indulgence in muscular movements, attempts to talk or to write or to laugh, voluntary holding of the shoulder girdle and abdomen taut, forced breathing, and increased tension of muscles may entirely corrupt the accuracy of the readings. Extraneous factors such as physical exhaustion and associated transitory endocrine and other somatic derangements may interefere with the validity of the determinations.

Assuming that mechanical errors have been eliminated, that technical errors have been reduced to a minimum, that the basal state is as nearly perfect as possible, and that no physical disease or abnormality is present, the basal metabolic rate in normal individuals will almost always be within the ranges of +10 per cent and —10 per cent.

Pathologically high metabolism rates are found most frequently in hyperthyroidism, hyperadrenalism, and in febrile states, and less frequently in leukemia, pernicious anemia, polycythemia, certain forms of hyperpituitarism, diabetes, terminal pregnancy, and cardiac decompensation.

Pathologically low metabolisms are found in myxedema, cretinism, cachexia strumipriva, hypoadrenalism, marked undernutrition, and certain types of pituitary insufficiency.

In each of 32 cases in the present series there was present at least once an elevated metabolic reading. Muscular disturbances, such as increased muscle tonus, muscular tremors and contractions were present in the great majority of these elevated tests. In a

few instances an increased output of adrenalin was suggested by transitory rises in blood pressure and pulse rate. In four cases elevated readings followed mental improvement or recovery and were associated with a gain in weight and improved nutritional status. Only in one case could the elevated rate be attributed to actual physical disease. Emotional conditions appeared to have no definite action in elevating metabolism, except perhaps by increasing muscle tonus, by producing other muscular disturbances, or by stimulating endocrine activity.

Not so easily explainable are the pathologically low metabolism tests obtained at least once in each of 47 cases. Eliminating the 8 undernourished cases and the 3 hypothyroid cases, there remain 36 patients who demonstrated lowered basal metabolic rates without apparent reason. Thorough physical examinations revealed in these cases no somatic disease to account for the metabolic abnormalities. This is in opposition to the contention of Fischer,[4, 5] who alleges that low metabolic readings are present only in those manic-depressive patients in whom there is associated physical disease.

Especially in retarded depressed and physically exhausted patients are decreases in muscle tonus and physical inactivity suggested as possibilities. That mental and physical inactivity may decrease the basal metabolism was demonstrated by the hypnotic experiments of Goldwyn.[59] Furthermore, it has been pointed out by Benedict[60] that profound relaxation as in sleep has a depressing action on the metabolic rate. However, in all except three stuporous cases in the present series the factors of decreased muscle tonus and physical inactivity did not seem especially prominent.

Thyroid involvement is another possibility, especially hypothyroidism without classical symptoms of thyroid deficiency, which condition Smith[61] believes not uncommon. That evidence of subnormal thyroid function is lacking in most cases of subnormal metabolisms without myxedema has been pointed out by Thurmon and Thompson,[62] McKinlay,[63] Carey and Brumfield,[64] who found that few cases responded favorably to thyroid therapy. There appears to be no real evidence that the thyroid gland is responsible for the lowered metabolism in manic-depressive conditions.

Deficiencies of the suprarenal glands as the cause of low basal

metabolisms in states of exhaustion following mental and physical strain have been suggested by Koehler,[65] and perhaps might apply to those extremely hyperactive manic patients who work themselves into states of exhaustion. However, physical signs of hyposuprarenalism were absent in all suspected cases in the present group.

Reports by various writers show that low basal metabolic rates are not uncommon even in individuals who are apparently normal. Thus McKinlay[63] examined 155 normal students, aged 17 to 35 years, at the University of Minnesota and found 27.9 per cent of the readings below normal. Boothby and Sandiford[66] discovered 103 out of 8,614 normal subjects with metabolic rates below —15 per cent, without evidence of hypothyroid disease. Wishart[67] and Means[68] have emphasized the fact that there is a group of individuals who during health habitually show metabolic rates between —15 per cent and —20 per cent without evidence of disease, whose metabolisms are apparently normal for the individual. It is therefore necessary to keep in mind the fact that the low metabolic rates obtained in some patients during the present study might have been normal for those patients. Especially suggestive are those cases in which the recovery metabolism remained subnormal.

A number of other theories have been suggested to explain pathologically low metabolic rates and fluctuations in metabolism in manic-depressives. Pötzl, Eppinger and Hess postulate a reduction of excitability of the vegetative nervous system; Stransky believes the cause to lie in an auto-intoxication by glandular products; Walker[6] attributes the reason to a decreased function of the autonomic nervous system; Wuth,[69] to disturbances of the neuro-vegetative mechanism and endocrine system; and Landis,[34] to vascular changes involving the volume-flow of blood.

Our inability to explain adequately pathologically low metabolic rates may perhaps be due to our ignorance of a great many metabolic processes and determinants. It is possible that when our knowledge of these determinants is more complete we shall be able to arrive at more satisfactory explanations.

It may be opportune at this point to emphasize the inadequacy of our present prediction standards. There is a general consensus of opinion that the Aub-DuBois standards,[70, 71] probably the most

widely used, are too high, since most of the variations within the so-called normal zone are below zero rather than above. Jenkins,[72] in a group of 34 apparently normal male university students found the mean metabolic rate to be —5 per cent. Using the same apparatus at the University of Chicago clinics, determinations on 1,126 men and 2,994 women were made and a mean metabolic rate of—9 per cent was obtained. MacLeod and Rose[73] have emphasized their opinion that metabolic standards for women are much too high. In 33 normal women Benedict,[74] using the Aub-DuBois standards, found 10 cases below —10 per cent, and an average of —7.3 per cent. Benedict concludes that the present prediction standards for women are too high and should be lowered by 5 per cent.

If we were to lower our normal zone to —15 per cent, as has been suggested, there would naturally be a larger number of tests in the present study within normal limits. Only 8 of 187 tests in the manic group and 19 of 223 tests in the depressed group would be pathologically low. In each of 17 patients a basal metabolism below —15 per cent would be present at least once. If we were to simultaneously raise the upper normal limit to +15 per cent, 12 tests in the manic group and 4 tests in the depressed group would be pathologically high. In each of 16 patients a basal metabolism above +15 per cent would be present at least once.

Conclusions

1. Repeated basal metabolism determinations in a group of 105 manic-depressive patients revealed a majority of tests within normal limits; however, the percentage of abnormal readings was greater than one would expect in a similar number of "normal" individuals.

2. In the manic group of 45 patients, 12.8 per cent of the tests were pathologically elevated, while 19.3 per cent were pathologically lowered. In the depressed group of 54 patients, 4 per cent of the tests were elevated and 26 per cent were lowered. In 5 mixed manic patients, 20 tests were normal, 5 tests were high, and 6 tests were low. In one circular manic patient 3 tests were normal and 3 tests were pathologically low. There was a general tendency

toward minus readings especially pronounced in the depressed cases.

3. Fluctuations in metabolism during the course of the psychosis were in many cases over a wider range than is considered normal.

4. The severity of the mental reaction appeared to bear little relation to the metabolic rate.

5. Psychomotor agitation and retardation, and the emotions of elation and depression had no discernible influence on the basal metabolism except in cases where muscular disturbances, such as increased muscle tonus and muscle tremors, were associated and caused increases in metabolism.

6. The emotions of anxiety and fear were occasionally accompanied by an increased basal metabolism, due probably to associated muscle disturbances and perhaps to increased adrenalin output.

7. Basal metabolism upon the advent of mental recovery tended to more normal figures than readings during the active psychosis.

8. Factors of undernutrition, physical inactivity, endocrine disorders and somatic illness accounted for a very small percentage of abnormal metabolic rates.

9. A great many abnormally elevated readings were associated with increases in muscle tonus, muscular tremors and contractions, and improved nutritional condition.

10. Although adequate explanations for the majority of depressed readings and for metabolic fluctuations were lacking, in a few cases decreases in muscle tonus, transitory endocrine abnormalities, and depression of neuro-vegetative function were suggested.

11. That a pathologically low metabolic rate may be normal for a few patients in the group is probable.

12. Average prediction standards in present use are perhaps too high and this factor may account for the tendency to minus readings. It is suggested that the Aub-DuBois standards be reduced five per cent.

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THE PAROLED FATHER IN THE MOTHER'S ALLOWANCE FAMILY*

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At the present time the New York City Board of Child Welfare, alone, is supporting about 994 families of men in State hospitals, 69 of whom are on parole. In many other cases support is being given by private agencies. The need is at once obvious for a close cooperation between the State hospitals and the social agencies interested in the families of the men in the hospital and on parole.

It is only natural to focus attention and interest on the material at hand. Hence, the social agency will perhaps see the family's needs before the patient's needs, while in the State hospital the patient's symptoms may attract more attention and his rôle in his family and the family needs be glossed over. Sometimes a kind of opposition develops or at least is felt to be present in a vague way between the hospital and the agency, particularly after the patient's parole to his family. In a maladjustment that may ensue, the agency may align itself with the family and the hospital with the patient. There is no necessity for special pleading as by opposing counsel for the family and for the paroled father. He himself is a member of the family and should always be so considered. The hospital and the agency should work together and it is the aim of this paper to arrive at a better mutual understanding of the situation to make for a more intelligent cooperation. Ultimately of couse it is the family as a whole that we wish to benefit.

The situation of the family whose father is in the hospital or on parole cannot be isolated and considered as such. In order to understand the rôle the paroled father plays in his home it is necessary to know the rôle he played before he became a paroled father, that is, before he was hospitalized.

What type of individual was the father before the development of his psychosis? His psychosis might have ushered in a new, transformed personality. For example, a paretic formerly skilful, alert, amiable and kindly gradually becomes awkward, dull and irritable. The question arises as to how much of her husband as he was first

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his wife remembers and how much of the second kind of individual he means to her. This is important in understanding whatever transformation has occurred in the wife's attitude toward her sick husband. In this connection the duration of the psychosis is also of obvious significance. I can think of the wife who said about her husband in the hospital, "He was such a good man before." This woman wanted her husband returned to her; of course, as the man he was first. She remembers him that way.

On the other hand, a psychosis sometimes does not transform a personality but merely exaggerates it. In some cases there is much difficulty in establishing the line dividing the pre-psychotic from the psychotic period. I can think of the paretic who even before marriage was unstable, flighty, irritable and inconsiderate. These traits describe his pre-psychotic personality. In his psychosis he became more unstable, more flighty, more irritable and more inconsiderate. The increase was gradual and continual and it could not be said exactly when his psychosis did start. At any rate the situation for the wife, which was almost intolerable at first, became even more intolerable later on. Here, too, it is important to know how long the wife has dwelt in the 'hell' of her husband's making, so to speak. In the case described, the wife said, "For God's sake, don't let him out of the hospital."

In evaluating the wife's attitude toward her paroled husband, however, one must not be led into the mistake of making too easy generalities such as that a wife whose husband has made her life a 'hell' will not want him back while the wife whose husband is sick only a short time and who was formerly amiable and lovable will want him back. This is not always so and we are, after all, only following the complexities of life in introducing complexities into our discussion. The personality of the wife must be borne in mind as well as that of the husband. The tenacity with which some wives cling to their 'hell', their passive resignation, their willingness to submit to new torture in having their husbands released to them make one sometimes feel that the whole thing is an expression of some complex on their own part, perhaps a masochistic one. In confirmation of this view is the fact that some women actually themselves seek for a 'hell', as for example in marrying a drunk-

ard or a gambler "to reform him". At any rate the fact remains that there are women who in spite of years of abuse from their husbands still wish them returned. Some women have lived in 'hell' so long that they cannot bear to leave it. In some cases it may be necessary to give moral support and strength to the wife not to keep her husband at home but to keep him away from home.

What is the attitude of the wife towards her husband's psychosis as such? For example, does she regard it as a disgrace or does she look upon it as an illness? Obviously it will be difficult to re-introduce a patient into a home or environment where he will be looked upon with shame, loathing and horror. There are so many possible and different situations in regard to the wife's attitude toward her husband's illness that it is difficult to make generalities. The important consideration is that every effort must be made to appreciate her attitude and understand how it has arisen. For example, suppose the wife discovers that her husband is a paretic. What attitude does she take towards his syphilitic infection and its possible implications, such as relations he has had with other women? What effect has all this upon her love for him and does it lead her to reject him? How does she feel about possible future relations with him? Again let us consider the case in which the husband has kept secret from his wife either past attacks of mental disorders he may have had or the occurrence in his family of some hereditary disease like Huntington's chorea. The discovery the wife can make in regard to such matters may cause her great shock and may profoundly influence her attitudes.

Attention must also be given to the attitude the father himself takes towards his psychosis. He may feel degraded, inadequate and unable to accept the position he formerly held in his family. Any reduction in his ability to work and his earning capacity may cause him to feel dissatisfied and may lead to his rejection by his family particularly if they are unable to see any connection even though it is present between his illness and his disability, partial or complete. Here much work is called for to give the family a proper understanding of the situation. On the other hand difficulties are often caused by the lack of insight on the part of the paroled fathers, particularly in cases where they harbor resentment

against their wives because of the part they played in getting them hospitalized. Where husbands are very paranoid and delusional it is not possible at times to accomplish anything in this matter but often I believe the psychiatrist in the hospital neglects his opportunities to change the patient's ideas and make him understand his family better.

Often the father's hospitalization is the climax of a long series of marital difficulties and crises. It results sometimes in a family dichotomy, some members aligning themselves with the father, some with the mother. Information obtained from both sides is conflicting and contradictory and it is difficult to arrive at a proper and just evaluation. After the father's parole in such a case it is necessary then not alone to adjust him and his wife but to adjust two opposed groups of relatives and occasionally even of friends and neighbors.

We are in a better position now to consider the events that take place in the home when the paroled father returns there. First, we must consider the most obvious thing, that symptoms and signs of his mental disease are still present or may recur, such as excitement and delutions of infidelity. At times the return of the patient to the hospital is indicated forthwith.

However, we must be on guard not to consider discord in the home to be necessarily due to the father's psychosis. It is entirely too easy to dismiss discord that arises by the simple explanation—"Oh, yes, the father was insane." After all, there are many cases of domestic discord in homes where all the members are sane. Many cases come to our attention where the father who has returned to the home from the hospital is more stable and less upsetting than his wife who has never developed a psychosis. It is not necessary to be psychotic in order to be unhappily married.

Let us assume that while the father has been in the hospital certain changes have taken place in the home under the supervision of the Board of Child Welfare or other agency. A regular and adequate allowance has been established. In addition sympathy, solicitude and understanding are available often for the first time and sometimes in marked contrast to the situation before the agency came to help. A worker may need to expend considerable effort

and ingenuity in establishing a family and getting things to run smoothly. Consider her feelings when the father is introduced sometimes quite suddenly and unexpectedly to his family. A task originally hard for the worker becomes much more difficult.

The presence of the paroled father in the home introduces many complications. First of all, there is an added individual to be supported. Where the couple are very much in love the wife may be agreeable to sharing her allowance with her husband, giving him food from her own plate, so to speak. Where love is secondary to harsh reality the wife may complain, may even refuse to take her husband home from the hospital or will do so only under protest, explaining that she hasn't enough to feed another individual.

The economic consideration is not the only one involved, however. An important psychological adjustment must be made between the couple along the lines I have previously mentioned. The factor of rejection is of great importance. The rejection of the father can be due to his long standing previous mental illness, recurrence of mental symptoms and marital discord which need not be entirely referrable to the father's mental illness. Often the wife rationalizes her rejection of her husband. For example, she may say she is afraid of her husband and does not want him with her any more. It is necessary for the worker to study this carefully to see if there is really a basis for the wife's fear or whether it merely expresses her rejection.

The easiest adjustment, of course, is to have the father remain separated from his family. In some cases it must be admitted that that is also the best adjustment. However, in other cases the greatest ability and skill are demanded from the worker in re-establishing the family as a whole by successfully re-introducing the father into the home and keeping him there.

It is much easier for the mother to adjust to the social agency than it is for her to adjust to her husband. It is not entirely fair to the husband, of course, to expect him to compete with the social agency. In the first place he is not as rich and in addition he has not as much wisdom and cannot supply the same degree of sympathetic understanding. The fact is, that the husband, even though a paroled patient, is entitled to sympathetic understanding as well

as his wife. Many times we are impressed by the fact that the wife finds life under the social agency infinitely superior and more satisfying than life with her husband. In some cases the reason is obvious, as for example in the case of the wife who has been subjected by her husband to many years of abuse and torture.

I would like to emphasize a less obvious factor which may operate in some cases. Sometimes we find that the wife's preference for the agency over her husband is based on her own inadequacy and deep-rooted feeling of insecurity. Her clinging to the protection of the agency is a regression to an infantile situation which to her may be more satisfactory than that involved in her relations to her husband; the agency symbolizing to her a perfect, ever and all-satisfying mother.

In another instance it may be simply a case of the wife selfishly balancing the relative merits of the agency and her husband and then throwing her husband into the discard.

Whenever feasible from a psychological standpoint the worker should keep before her as an eventual aim the establishment of the home with the father as a member, and work with the mother should be based on this aim. This is especially true in cases where recovery takes place or where the prognosis is favorable. I do not wish to appear to be exaggerating, but it is well sometimes to forget that the man was or is psychotic and to consider the total situation at home not from the narrow standpoint of the symptoms the man may have shown or does show but rather from the broader standpoint of the interrelations of all the individuals in the home, each and all of whom may be said to have some difficulties of adjustment and personality defects. For example, in two cases that can be recalled the difficulties arising after the return home of the fathers were due not to their mental symptoms but principally in one case to the wife's sexual frigidity and in the second case to the wife's instability coincident with the onset of her menopause.

The type of consideration I have been discussing calls for the most intelligent cooperation among agencies and hospitals interested or involved in the case. I do not believe that this cooperation can best be gained by the interchange of written reports, although this may be necessary for completion of the records and as a prac-

tical necessity. Newspapers have familiarized us with cases of couples who fall in love and even marry after an acquaintance comprised solely of an interchange of letters, but I doubt that our style of correspondence will bring the hospital and agency to a closer union. Oral consultations and discussions are much more satisfactory though for practical reasons it may not be possible for them to be routine. For some time now at the Central Islip State Hospital two workers of the Board of Child Welfare have made regular visits to the hospital for the purpose of more complete case investigations and discussions with members of the hospital staff whenever indicated.

A certain degree of familiarity between workers of the hospital and of the agency makes not only for more pleasant relationships but also for a more tolerant understanding based on knowledge of the particular difficulties under which the worker is employed and knowledge of the general and specific limitations imposed on the agency and hospital. For example, I am sure that some misunderstanding would be prevented if agencies were familiarized with types of commitment, policies regarding parole and discharge of patients and similar considerations. In the same way if the hospitals fully appreciated the difficulties involved in the maintenance of a family by an agency, they would at least acquaint the agency of any proposed parole so that an extra allowance could be sought and preparations made for the patient's entry into the home.

In view of the factors pointed out in the earlier part of this paper, I am convinced that these recommendations, tending to enhance cooperation between agency and hospital will be sure to benefit both the patients and their families.

A PSYCHIC DEFENSE AGAINST DISAGREEABLE REALITY

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Among the psychoses, some show much more clearly than others the reality-dodging purpose which they serve. The extent to which the personality alters in seeking evasion of life situations varies from imperceptible change to the profoundest of deteriorated states. In the "prison psychoses", reactive disturbances of the nature of acute confusional, hallucinatory, stuporous states, marked memory and intellectual impairment, delusional trends and so on, are very obvious shelters for self-protection. In soldiers undergoing punishment there may appear a "flight into disease", the obvious purpose of which is to substitute for the disagreeable present a situation more compatible with the sense of self-security. Often there is a very extensive retrograde amnesia. Not alone are the disagreeable memories repressed but also memories having associative connections with these, and there results a regression of the personality to an earlier period of life, often into childhood. The buffoonery syndrome, pseudo dementia, the ecstasies and the other hysterical twilight states, called "purpose psychoses," in which repressed wishes are realized, are self-evident evasions of the facts.

Mental reactions of this type were formerly regarded by many as deliberate feigning of insanity. We know now, however, that the latter is rare, and that indeed malingering is itself allied to mental disorder.

Little understanding was achieved of these reactions until the advent of Freud's psychoanalysis. Freud showed that the symptoms have an unconscious meaning and even purpose and that they are symbolic distorted expressions of repressed wishes. Jones points out in these patients the persistence of childishness as a mental trait and compares the patients with children who, when discussions of pregnancy, etc., are held by their elders, react in an exaggeratedly childish manner to give the impression of being non-understanding.

A regression to puerilism and other mental reactions akin to this

occur not rarely in the more familiar psychoses and generally in the face of frankly unpleasant situations.

The following is the report of a patient (schizophrenic) who reacted to difficulties with a marked retrograde amnesia, puerilistic behavior, some of the peculiar features of prison psychosis, paranoid projection.

Adele A. was born in New York City 35 years ago, the second of three children of Scotch-German parents, Episcopalians in faith. The mother, a "highly nervous" woman, had no difficulties during the pregnancy and labor was easy, without unusual incidents or complications. The patient's development and general health during infancy and childhood were fair. She escaped the more serious childhood diseases. There is no history of infantile oral difficulties. Of neurotic habits are remembered nail biting and marked temper tantrums in reaction to even mild opposition to her wishes. Nothing is known of childhood sex habits.

The father died when the patient was five years old. The mother shortly remarried and the patient, her brother and sister, were brought up "in an atmosphere of over-protection" by a married, childless aunt. The mother, with whom the patient came only weekly in contact thereafter, died 14 years ago.

The patient started school at six and progressed normally. She was very studious, but though ranking well in her classes, was always apprehensive of examinations to an unnatural degree. She was a delicate child and a frail adult, always subject to colds and nursing a "poor digestion" and an "anemic condition". She has taken iron in its various forms from the age of five. "I never was strong. I am fine texture to begin with." Invariably a ride in any type of vehicle made her ill. She always had a pronounced "imaginitis" on the subject of illness, "catching, readily all of the diseases she heard of and spending many hours in the offices of physicians".

Bashful and seclusive, she was timid and reticent, lacked self-confidence and was vaguely apprehensive and hypochondriacal. She was jealous, suspicious, selfish, unusually sensitive and craving sympathy and kindness. She was highly opinionated, extremely obstinate, excessively neat and fastidious. Very carefully she chose

what few friends she had, and she was referred to as "The Dutchess". Hesitant and very deliberate in coming to decisions on matters of even minor importance, she was very poorly adaptable, little able to meet reality squarely, easily frightened, given to procrastination, and an "ace at suppression".

She was highly nervous, impatient, fault-finding, over-conscientious, with spasmodic high output of energy. An occasional show and shopping were her only diversions. She was honest and affectionate, moderately religious, not superstitious, and was considered to have good common sense.

She regarded herself as "sweet and lovable", and a lover of "elegance, culture, refinement, quality". In the opposite sex she looked for "cute witty men, well groomed and with "character, kindness and sincerity". She formed few heterosexual friendships and showed a more than passing interest in only one of these. She was very modest, felt that discussion of sex was "not good breeding". She "did not permit herself to think of sex for it is not good for the mind". "Men are the sexy ones. I am not at all bothered by sex. I never have sex urges; if I were married, maybe. Time enough then to think about it."

Graduating from public school at 14, she attended a commercial high school for three years, leaving then because her "vision was feeble". For seven years she worked as salesgirl in the jewelry department of a large metropolitan store, and was much liked here. She left this position to become adopted as a "companion secretary" by a very wealthy widow who had taken a great liking to her, and who promised her a life of unending ease and luxury. For the following nine years the patient lived with this Mrs. M., rather a secluded life, but one in which all of her material wants were satisfied, and she was apparently very well contented. In the stock market crash and subsequently, however, Mrs. M. lost enormous sums of money. Drastic economies replaced luxurious spending. Adele felt very deeply the loss of the security which the wealthy surroundings had afforded her. She commenced to view with regret her decision in casting her die with Mrs. M. and searched for avenues of escape. For a year preceding the onset of the psychosis she showed a considerable interest in a young man, who returned this

interest strongly at first, later casually. He had a paralytic mother to support, was very indefinite about marriage, and Adele finally gave him up because "I thought he was too shallow. We probably doubted one another. Maybe I thought he was unfaithful". Further than that she grieved very deeply over the break in this friendship, and that Mrs. M. had been definitely opposed to it, she will reveal nothing.

The first symptoms of the psychosis proper appeared three months previous to her commitment. The etiology was given by her visitors as (1) brooding over the financial losses, and (2) brooding because of the break-up of the love affair. At any rate, the patient rather suddenly entered into a befuddled state of mind, said she was being accused of setting fire to the apartment, and that she wanted to die.

Her brother took her to his own home. Here she was moody, sulky, inactive, almost totally inaccessible, but then improved until when visited one week later by Mrs. M., she reacted in an agitated manner. She kept walking away from Mrs. M. in a circular route, staring apprehensively, then resumed the inactive, almost mute state. For a month following the visit she continued thus, appeared not to recognize those about her, had to be fed, dressed, and otherwise attended as if she were a child. She then again seemed to be improving when another visit by Mrs. M. resulted in a recurrence of the above behavior. Adele would not talk to her at all, kept retreating apprehensively, walked in and out of the rooms in a confused state, bit her fingers, scratched at her face, and repeatedly pulled down the shades. She said later that Mrs. M. had stared at her over her bed in the middle of the night, that she had hypnotized her, that the people on the streets looked peculiar, that they were against her, that Mrs. M. was very powerful and perhaps it would be wise for her to return to her home or she would harm the brother. Answers to questions were monosyllabic after repeated enquiries. She felt that everything in the environment had a particular and important reference to her. During this three months interval Adele lost 40 pounds in weight. She got up in the middle of the night attempting to leave the house. When her brother lost his job, she again talked of suicide and was brought to the hospital.

Kings Park State Hospital: Admitted November 29, 1933. She offered no resistance en route, nor to the initial routine. Except for undernourishment the physical examination was completely negative. On the ward she was seclusive, absorbed, and apparently calm. During the mental examination, she sat uncomfortably on the edge of the chair. Facial expression was for the most part calm and placid. Occasionally she would pick at her nails and shake her head in a perplexed and confused way. The majority of questions, even though repeated many times, yielded nothing in return. She either stared blankly and placidly or appeared extremely dazed, apparently attempting unsuccessfully to comprehend. Rarely, she would stroke her forehead lightly, gesticulate and mumble a few indistinguishable words. Rarely too, she moaned and wrung her hands in an agitated manner, but with calm features. Early in the mental examination simple commands were fairly readily obeyed. Later, the following remarks were made spontaneously and repeatedly, "please, oh, what is it all about?" "jealous of me, Mrs. M.", "with Mrs. M. many years, many, many years". Asked if she liked Mrs. M., she nodded in the negative and finally said this was because she would awake in the night to find the latter staring at her. She felt that perhaps Mrs. M. tried to make her do things and also to kill her. Nothing further could be learned then in this direction.

She reacted to painful stimuli like a timorous child and later her behavior appeared very childish. She cried, talked more clearly in babyish intonation, said the examiner was horrid to inflict pain, but that since this apparently was his purpose and the purpose of others, it was all right to continue to do so. She was then immediately calm and placid and conveyed the impression of having no understanding whatsoever of what was going on. Nevertheless, several times, she smiled broadly at pleasantries in spite of herself.

She nodded in the negative when ased for the name of the hospital, its location and purpose, the year, month, and identity of the examiner. Asked where she was born, she said, "I don't remember"; her age, she nodded in the negative. Here she became transiently agitated and said repeatedly, "jealous of me, Mrs. M., with Mrs. M. many years, many, many years". She said she did not

remember anything at all in answer to the simplest questions concerning her past life, and she nodded negatively in an uncomprehending manner even when asked her name. She then pointed to the floor and repeated childishly, "hospital".

She was asked again and again to repeat the digits, 4, 6, 9, 2, but each time did so incorrectly. She appeared not to comprehend what was asked her to do in the performance of Marie's three paper test. No cooperation could be obtained for the word pairs test.

Asked to count from one to twenty, she said slowly, "one, one, one. . .". Again, from twenty to one, she replied, "twenty, twenty, twenty" . . . To the remainder of the simple calculations she nodded slowly in the negative. She answered likewise when asked to add two and two, and one and one and thereafter answered all problems put to her, simple or difficult, with "one".

Asked to read the cowboy story, she simply looked fixedly at the book. She appeared to comprehend nothing when the story was read to her. When, however, a letter from her brother was shown her, she read it through rapidly to herself in a very interested way. Asked now to read it aloud, she looked at the letter as she had at the book, and continued to look blankly at it when it was turned upside down.

Attempts were made to have her write. For a time she moved the pen over the paper above the writing surface; later she made line after line of meaningless dots and dashes, saying as she did so, "many years".

Asked upon repeated occasions to light a match, she insisted always on lightly stroking the wooden end against the sanded surface. After many requests she finally turned the match about, but continued her light stroking. When the match eventually flared up she stared fixedly at the flame as it crept toward her finger tips. The flame died out and the patient remained in the fixed posture for several minutes.

Given a watch with the hands pointing at 2:30, she pointed at the figure one whenever asked the time and repeated "one". Given a comb, she named it correctly and, when asked to do so, combed her hair in a normal manner. She was now shown a key but called this

a comb and with it went through the process of combing her hair. A pen now became "a comb", the matches and a pipe, too. Asked for the matches, she picked up the key and called it a comb; a five-cent piece was "a comb"; also the ash tray, a towel, the phone, a book, the door, and she "combed" her hair with all of these. From this point on, she answered every single question with the word comb; questions in history, geography, mathematics, and so on, were all answered with one word, "comb", childishly inflected.

On the ward she continued idle, seclusive and absorbed. At times she walked about in an apparently confused way and said that she could see Mrs. M. on the hospital grounds, and she was then mildly agitated, though always with placid expression. She attended the various amusements and activities but seemed little interested. For a month following her commitment she continued to write in dots and dashes, to strike matches at the wrong end, and to nod in the negative in answer to the great majority of questions, and this generally after the questions were asked repeatedly. Whenever shown various common articles and asked their names, she held these awkwardly and looked blankly without answering. She would not read, yet looked furtively to see what the examiner would write. She would obey commands now only when these were made by pantomine. Occasionally she mumbled unintelligibly. The only understandable spontaneous statements were the following repeatedly made remarks, "many years I lived with Mrs. M., many years, Mrs. M."

During January and February she was seclusive, absorbed, requiring spoon feeding for the most part, and continuing to nod in the negative when asked her name and the simplest of questions. Often she mumbled indistinctly or she would answer with "Mrs. M., many years with Mrs. M." However, during this interval, she made a gradual improvement. Though she wrote in dots and dashes, when asked to copy writing she did so, making her handwriting as close as possible to the examiner's style. She followed the examiner's writing also in errors, spelling Brooklyn with one "o", cigarette with three "t's", and so on. She copied long sentences replete with errors in a well forged manner and even copied ink blots. Asked if she believed herself insane she now nodded in the affirma-

tive. In response to pleasantries she would often smile in a natural way, then very quickly would check the smile. The rare spontaneous statements continued as follows, "many years I lived with Mrs. M., many years, many years with Mrs. M., all the time, right into my bed, always around me, I am so tired". Asked if homosexual practices were carried out, she nodded reluctantly in the affirmative and then said, "voices many times, different things, noises, and things like that". She nodded in the negative to questions relevant to the voices, then said spontaneously, "why am I being persecuted, oh, I don't deserve it all, (crying briefly), so much has happened that I don't deserve, oh, why is it?"

Visited by Mrs. M., the patient at first showed no apparent emotional reaction, later appeared slightly fearful, retreated when the latter attempted to approach her and said, "Mrs. M., many years I lived with you, oh, everything is so different, I can't understand it all". Without apparent reason she then said, "Aren't you awful to say that".

In early March she was more accessible, though the questioning was still extremely difficult and questions were only occasionally answered. At times she talked spontaneously in a slow, halting way with frequent blocking. She said, "I resided many years with Mrs. M., a companion-secretary, all the time with her. It's been . . ." Here she was blocked for ten minutes and then continued, "It's untruthful, I don't understand . . . there is something . . . they don't seem to believe that I was companion and friend and secretary to Mrs. M. for many years and that I resided at those places with her at Avenues A, B and C." Repeatedly she gave the address, Avenue C. "I feel that there is absolute proof that a great deal has been spoken that should not have been . . . I don't mind being . . . I thought I should not have been . . . I don't want to be something I'm not. After all I don't know how God could do that because I don't deserve so unjust, untruthful . . . there seems to be a confusion . . . something I don't understand and I don't deserve it. I would rather anything than that. They seem to be trying to form a situation between me and Mrs. M. that should not be. It seems to be made up and it shouldn't be. It's Mrs. M. making things up that are not so. They are trying to put

me in some sort of condition that I shouldn't be placed in. So much has happened since I left Avenue C and I can't get it clear. I seem to be so different since Avenue C. I have . . . I don't know why I should be blamed for so much that I have no right to be." Asked to write at this time, nothing came of it. She crouched over for a long period holding the pen above the paper but made no mark and stared fixedly.

Later in March, with increasing accessibility, she commenced to write spontaneously. Day after day, orally and in writing, the following was her trend: "There are so many untruths said about me, so many injustices. Oh, what is going to be done about them? They seem to blame me for so many things that I shouldn't be blamed for. It is very unjust and undeserved. In God Almighty's Holy Name, the untruthfulness of it. I am accused of so much that it reminds me of Jesus—how the multitude condemned Him, so unjustly and undeservedly. I think I am a victim and a martyr to very unjust, undeserved untruths. Oh, it's so untruthful, the untruthfulness of it. The people seem to think that I have been an immoral woman and I haven't been immoral with men. They seem to think I am a dancer. It is so untruthful. They think I have been immoral and I have never been immoral. Oh, it is so unjust, so untruthful. My Father in Heaven, where are You. They try to make me as a gay woman and a dancing woman and all those things I have never been. Oh, oh, oh, oh, what am I going to do?" Despite the apparent intensity in these productions, they were made always in a definite affectively rigid way.

Up until early April, the patient insisted on wearing State clothing, removing any of her own when this was given her. At this time, as she explained later, she one day found herself staring at her reflection in a mirror, "I suddenly became aware that I was I, I realized where I was, could not understand, since I was always so fastidious, how I could have preferred State clothes". Subsequently she went to great pains with her personal appearance. She was now considerably more alert and her affectivity much more closely resembled the normal. However, her productions, written and oral, continued an endless repetition with only occasional new additions. She now expressed increasing resentment to the hallu-

cinated content, also in a phonographic way, day after day. "In the name of Almighty God, my Judge, who is a God of Truth and Justice, I, Adele A., in His Holy Name do firmly deny there was ever a fire at Avenue C, Apartment 1C, the shock of which accusation caused me to lose my mind for many months and which has placed me so undeservedly before the people as a person to be scorned and despised. Just one instance of these untruths was the highly advertised (for none other than their own material, commercial gain, callously, mercilessly, regardless of their untruths terminating in a young and innocent woman being made a victim of their lack of principle and conscience) false made up story of a fire at Avenue C, Apartment 1C, when there was no more a fire there than there has been one here, or an earthquake in the apartment".

"In Almighty God's Holy Name and to the people I firmly deny that I have even been employed as a maid or ever worked in a laundry in my life. I am not an impure woman, nor is my system impure, as I have never been possessed by the opposite sex in my life though I am 35 years old. I have known very few young people and have no fondness for drink whatsoever. These are all the accusations of scheming, terrible persons who should be made to answer and retract them publicly. I hear all the patients say these things continuously. The innocent, it appears, must give up their life for the guilty schemes of others."

During May the patient showed increasing mental and physical improvement. Her entire trend, however, still centered about the persecutory system, which was headed by Mrs. M., and was still given as though she had memorized it and knew nothing else. It continued still very difficult to obtain a relevant answer to questions. The patient would stop her talking, listen attentively, and then go on from where she left off, without usually answering the question. Questions on the sexual situation at this time were never answered, and the patient for some time subsequently would stare blankly, mutter inaudibly, and then show considerable blocking. She said she did not remember writing in dots and dashes. She could recall hazily striking matches at the wrong end, naming articles with "comb", and so on, but could give no explanation for this.

During May, in addition to the already noted stereotyped stream, the following, also stereotyped, sentiments were added, "There are several persons back of this series of outrageous untruths who should be questioned. I am able now to recall the names of these horrible persons and feel they should answer to the law for deliberate, planned untruths to destroy not only my name and character but my very life itself".

"I feel my mental breakdown was caused by the realization of a vast amount of deception and scheming intrigue of these persons whom I at one time considered were truthful, sincere individuals. I shall mention their names when I have recuperated sufficiently in mind to risk the taxation of such for I am firmly convinced now that these persons set out maliciously and premeditatively to destroy me with their utter lack of conscience and profound disregard for truth. When I feel strong I shall not hesitate to confront these individuals and so cause them to admit their scheming and untruthfulness. I see no reason why I should permit calculating, selfish, monetary aspirations of others to cause me so great a sacrifice as my normalcy of mind and good name. Previous to these hurts, shocks, and undeserved stigmas I was a well, intelligent and respected young woman but their untruths have transformed me into an invalid with a blank mind for many months now and in fact they almost took as toll my life itself."

"I fail to see where it is befitting of American justice to a young American woman to forfeit either my reputation or my life for the malicious enmity, commercial aspirations and wicked untruths of jealous, insincere friends, only pretended friends at Avenue C. They are murderers, and schemers, for their untruths were willful, premeditated and most destructive."

"I have never harmed a human being in my life and never wished to. No one ever lost their life through me, but unless someone recognizes I am speaking the absolute truth and clears me of this gross injustice, my life will be forfeited, which does not seem just or righteous to me."

"I feel certain, positive, in our great America, true Americans would not be guilty of such a lack of justice and conscience, to continue these unjust condemnations but would be ready and eager to

clear away these undeserved stigmas and not ask a young life be forfeited at an untimely age, which would be tremendously wicked, uncivilized, ungodly and most un-American."

"I wish to be cleared of this outrageously untruthful accusation, and these sinister, scandalous untruths can be righted, cleared through State investigation and analysis, and my name vindicated to the people."

"While it would be exceedingly humiliating for me to clear these outrageous untruths I would even go to jail in order to subpoenae those to justice who are responsible for the profuse broadcasting and advertisement of these dreadful sinister untruths to the public."

"Attribute my improvement primarily to time and the interest and patience of the doctors and nurses and the faith and encourgement of my brother and sister and last but not least the divine will of Almighty God."

"I feel I rightfully belong in the hospital until my mind and intelligence has been fully restored to me and I am mentally able to right this series of wicked untruths to the community and to the world."

In early June the patient suddenly ceased her daily written protests and very shortly stopped also her verbal stereotypy. She insisted that the hallucinations were gone and said that though they seemed very real, they might probably have been imaginative. The ideas expressed in the psychosis, she felt, might probably have been delusions. Attempts to obtain a better understanding of the genetic evolutionary aspect of the psychosis were, however, met with evasion and suspicion. The patient had "forgotten everything"; "the incident was closed", she was "still very hazy", could not concentrate; "I do not seem to think of the past, present, or future; I am just existing. No thoughts come to my mind, my mind is a blank. I cannot remember from one moment to the next. All this scrutinizing bothers me; why bring that up all the time; when are you going to stop questioning me; I am going to become a deaf-mute; I don't want to change my personality; I'd have to die and be reborn to be more frank".

She pleaded instead that attention be paid to her physical condi-

tion, that her heart be X-rayed since it palpitated so, that she be investigated for brain tumor, treated for arthritis and floating kidney, anemia and indigestion, backache and general debility.

She was greatly irritated by even slight noises. "I am more nervous now that when I didn't know anything. I am self-conscious, ill at ease. People bother me so, especially strange people. I feel so insecure. I don't know what I'd do if I had to leave the hospital now. I'm fagged out all the time. The thought of having to go before the staff upsets me terribly. I know I'd just go back into a stupor if I had to go soon."

The mere transfer of the patient from one ward to another (a better one) at this time, nearly brought about a recurrence of deep regression. For several days she again required spoon feeding, and for weeks she protested she could not become accustomed to the new surroundings, announcing then that she would be "terribly upset if transferred elsewhere, even to the original ward".

On this ward the patient has adjusted well for several months now. She is neat to a fault. She is referred to by the other patients as a "childish sort". Her brother and sister feel, as we do, that she is recovered to the prepsychotic level. The hypochondriacal complaints she has had for years continue. There are no trends nor hallucinations and the emotions appear to be entirely intact. There is almost no memory of the psychotic content and behavior. The confession of homosexual practices has been emphatically renounced. The "cure" has apparently been brought about by renewed strong repression.

Unfortunately, efforts to obtain a clear understanding of the psychopathological mechanisms have continued fruitless. We are able, therefore, only in some measure to formulate our conclusions as to the reasons for the reactive disturbance. The close relationship of the constitutional make-up to this is not difficult to see. The patient, unduly sheltered from an early age, never got away from a certain childishness. Much of the hypochondriasis might be attributed to a wish for sympathy and understanding. It would appear, then, that in the face of "insurmountable difficulties" the patient's unconscious wish to live again in the security of childhood days assumed temporary dominance. Significantly, she stated, "I wish I

was a girl when my mother was a girl—people were much more sincere then". It may be that the fear of loneliness (loss of lover) aided greatly, as Janet has shown it might, in causing the *'retour à l'enfance'*.

The dynamic force of other repressed wishes having a bearing on the psychosis showed itself in the delusional-hallucinatory state. Instead, as often occurs, of living temporarily in a state of gratified wish fulfillments the patient was faced with her projected unconscious punishing her—a paranoid mechanism. Whether or not a sense of guilt was operative here is problematical. The insistence for a time on wearing State dresses, in addition to signifying a desire for complete irresponsibility, would point to this. In the projection, others, of course, were the guilty ones. The wish to be free from Mrs. M. nevertheless appears clearly. She would perhaps wish the latter were dead (fear of being killed by Mrs. M., "no one ever lost their life through me"). She might even go so far as to set the aged woman's apartment on fire (accused of setting fire). This latter accusation might also, of course, be a symbolic one of sexual significance. She would be free to lead a life of less restraint (immoral, gay woman, a dancer). Incompatible with the personality, these thoughts were strongly repressed; then, bursting through, were projected and reacted to as entirely foreign. She then clamored for State investigation and soon for a "return to her respectable status". Toward this return she nevertheless stubbornly refused the aid that was offered her, resorted instead to her "ace at suppression" powers and succeeded finally in making a "recovery" in which the conflicts are again buried in the unconscious.

TREATMENT OF GENERAL PARESIS WITH COMBINED ELECTRO-PYREXIA AND TRYPARSAMIDE*

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AND
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In a previous communication[1] the authors reported the results of the treatment of general paresis under two forms of therapy. They had treated a first group of patients with electropyrexia alone and a second group with electropyrexia and tryparsamide. In the second instance the patients were given one or more courses of tryparsamide following a full course of pyrexia induced by an ultra-high frequency apparatus. The present communication constitutes a report on a third group of general paretic patients, who experienced electropyrexia and tryparsamide therapy simultaneously.

It was desired to determine, if possible, whether the clinical outcome might be different if thermotherapy was applied while there was tryparsamide in the body. Each patient, therefore, was given an intravenous injection of tryparsamide (1.5 grams) approximately one-half hour before the pyrexial course started. Since each individual febrile treatment was approximately seven hours in duration, during which the temperature was maintained between 104-105° F., it may be said that the tryparsamide operated in this heated medium. It is not known, however, what the behavior of tryparsamide is in, say, the blood stream, when the temperature of the latter is several degrees above its normal. However, the plan of the present research project was to determine if there were sufficient observable clinical changes to warrant further research studies.

Method of Treatment

Tryparsamide, in doses of 1.5 grams, was administered intravenously one-half hour before the beginning of electropyrexia. In order to avoid undesirable reactions along the optic pathways the small dose (1.5 grams) was given. This was done particularly so

*From the clinical department of the New York State Psychiatric Institute and Hospital, New York.

1. Electropyrexia in General Paralysis. By L. E. Hinsie and J. R. Blalock, State Hospitals Press, Utica, N. Y., 1934.

that injections might be given twice a week, with a reasonable guarantee that at the time of the second injection all or almost all of the arsenic would be out of the body system, or at least it could not be recovered by the usual chemical determinations. It has been found (Fordyce and Myers) that, when patients receive 3.0 grams of tryparsamide, arsenic is no longer detectable in the spinal fluid after 72 hours. Since we gave only half of that dosage and since we spaced the injections at about 72-hour intervals, we believed that we were treating our patients in a reasonably safe manner. At the same time we recognized that the dosage was one-half of the usual, although it should be stated that it is not yet known what the optimum dosage of the drug might be. Since each patient received 3.0 grams of tryparsamide a week, he was getting as much each week as is generally given.

The pyrexial course, in this third group of patients, was altered, in that two treatments, rather than three (which is usual), were given each week. However, there was no variation in the individual pyrexial course from that given to the patients in our first and second groups; and each patient received 10 pyrexial treatments. Therefore, each patient experienced (1) a total temperature course of approximately 70 hours of fever of 102.5° F. or higher and (2) a total of 15 grams of tryparsamide. As a rule, tryparsamide injections, in the usual 3.0 gram dosage, were continued after the pyrexial course was completed, the patients having received one or more courses (12 injections comprised a course) depending upon their clinical condition.

Survey of Clinical Material

It is important to know that the patients were carefully selected. There were two principal requirements: (1) Only those patients who would most likely be able to tolerate the pyrexial course without untoward complications were included; (2) No patient was accepted who had any subjective or objective optic nerve involvement. Furthermore, no patient was included who had had any previous anti-luetic treatment that might have influenced the course of the clinical disorder; finally, only those general paretic patients who had acquired syphilis in adulthood were selected. The total

number of patients that met the foregoing requirements, including the treatment planned for them, was 22.

Prior to the institution of treatment, the total number of patients who were considered suitable candidates for the combined treatment was 30, but eight of them failed to take the full course. Treatment had to be stopped in seven of the eight patients, because of their reaction to febrile therapy. Three of the seven developed severe burns; one developed persistent vomiting and diarrhea during fever treatment; two showed inability of the heart to meet the "heat load"; one became delirious and agitated early in the course of fever treatment. In other words, seven out of 30 (23 per cent) selected patients were unable to take the prescribed course of heat treatment. Tryparsamide treatment was discontinued in one patient who developed subjective visual disorder.

Among the 22 patients who took the prescribed course there were 18 male and four female patients.

The ages ranged from 28 to 55 years. One patient was 28 years old; nine patients were in the fourth decade; ten were in the fifth decade, and two were in the sixth decade. The average age for the group of 22 patients was 41.6 years.

The average duration of symptoms before treatment was started was 13.2 months. In nine patients symptoms of general paresis were present from one to six months before treatment was started; in four patients the symptoms had started from seven to 12 months before treatment; in seven patients the symptoms had antedated treatment from 13 to 24 months, while in the remaining two patients the duration of symptoms had been 25 and 36 months.

Among the 22 patients the reaction-types were as follows: Simple dementing, 10 patients; expansive, five patients; manic phase, one patient; depressive phase, three patients; schizophrenic, three patients.

Clinical Results

Almost all of the 22 patients completed the prescribed course of treatment at least six months prior to the time the present report (April, 1935) was written.

Among the 22 patients, three male and three female patients (a

total of 27.3 per cent) are in a phase of clinical remission; it may be of interest, perhaps more as a clue to further research, that three of the four female patients gained a clinical remission. The condition of eight of the male patients (36.4 per cent) is described as "improved", meaning that their mental and physical condition is distinctly better than it was before treatment was begun. The condition of six male patients and one female patient remains unimproved. One patient is dead. Of the 22 patients, therefore, it may be said that 14 (or about 64 per cent) benefited by the treatment.

Laboratory Results

In the group of 22 patients there was no correlation of the clinical and laboratory results. It may be said about the laboratory results in general that the cell count and globulin content of the spinal fluid are reduced to normal shortly after the cessation of treatment and that the Wassermann reaction of the blood and spinal fluid tend toward negativity at a later period. In other words, the laboratory results in this group of 22 patients were similar to those commonly observed after modern forms of treatment of general paresis.

Following treatment the cell count of the spinal fluid was normal in 21 of the 22 patients. In one-half of the patients the globulin content of the spinal fluid was reduced to negative, while in one-third it underwent partial reduction and in the remaining (four) patients there were no changes.

The spinal fluid Wassermann reaction was reduced to negative in six patients and there was an appreciable reduction in nine other patients. In the remaining seven patients there were no changes.

The colloidal gold curve was reduced to negative in four patients and it was reduced in intensity, though not to negative, in 13 patients; in two patients the curve remained unaltered, while in two others there was a slight increase.

The blood Wassermann reaction was reduced to negative in one patient; it was appreciably reduced in seven patients; it remained unaltered in 14 patients.

Conclusion

It appears that when tryparsamide is given during pyrexial treatment to patients with general paresis the clinical results are approximately the same as the results achieved when tryparsamide follows pyrexial treatment. The remission rate is about 30 per cent. It may be expected that another 30 per cent may show varying grades of improvement.

TREATMENT OF GENERAL PARESIS--COMPARATIVE RESULTS

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In May, 1927, the writer reported[1] the figures taken from the records of the Buffalo State Hospital on 100 cases of general paresis treated with benign tertian malaria between the dates of August, 1924 and August, 1926. These 100 patients had no subsequent anti-luetic treatment. The results at that time were: Complete remissions, 26; partial remissions, 10; improved, 14; unimproved, 21; died, 29. In determining the results of treatment the patients' total behavior reactions were used as the criteria, as will be seen from the following definitions:

Complete Remission: Ability to sustain self in the community at as high a social and economic level as prior to the onset of psychosis (irrespective of serology). Idleness because of economic conditions is not a disqualifying factor, provided that the patient possesses the potential earning capacity.

Partial Remission: Ability to sustain self in community, but at a lower social and economic level than prior to the onset of the psychosis.

Improvement: Undoubted and persistent diminution of psychotic symptoms, but still requiring supervision or help, inside or outside of institution.

Subsequent to 1926 it became the policy of the hospital to follow up the malaria with some other specific treatment, and since July, 1928, unless contraindicated, practically every paretic received one or more courses of tryparsamide. In order to ascertain the relative merits of malaria alone and malaria plus tryparsamide, the writer investigated the records of 100 consecutive cases of general paresis who received the combined treatments between the dates of June, 1932 and August, 1934, and whose present (March, 1935) status could be ascertained. Each patient in this group was given malaria as in the first group, but after recovery from the malaria they were given two- or three-gram intravenous injections of tryparsamide, usually at weekly intervals. Only those cases

1. Levin, H. L.: The Results of Malaria Treatment of Paresis, N. Y. State J. Medicine, 28: 555-630, May 15, 1928.

were included in this study who had completed at least one course of 12 injections. In the table given below if a patient received a fractional part of more than one course, the fractional part is disregarded, e. g., a patient who completed two courses of 12 injections and for whom treatment was stopped after the fifth injection in the third course, is shown as having received two courses.

TABLE I

No. of courses tryp.	No. of patients	Complete remissions	Partial remissions	Improved	Unimp.	Died
One	47	8	3	12	15	9
Two	41	7	7	10	15	2
Three	11	3	3	2	1	2
Four	1	1	0	0	0	0
Totals	100	19	13	24	31	13

The records disclose that as of March, 1935, there are: Complete remissions, 19; partial remissions, 13; improved, 24; unimproved, 31; died, 13. A comparative table follows:

TABLE II

Period treated	Total number	Complete remissions	Partial remissions	Improved	Unimp.	Died
1924-1926 malaria alone	100	26	10	14	21	29
1932-1934 malaria with tryp.	100	19	13	24	31	13

Of course, in evaluating methods of treatment by comparing the outcome of one group of humans with that of another group eight years later, we must bear in mind that known and unknown variable factors may enter into the picture and one must use extreme caution in interpreting the statistics. It is the writer's impression that the clinical material that comprised the second series of 100 cases is practically the same as in the first series. Both groups were drawn from the current admissions to the hospital, from the

population of Erie and Niagara Counties, and the methods of choice for treatment were similar. However, one variable is worthy of mention; in the 1924-1926 group no patient had received any previous malaria treatment, whereas in the 1932-1934 group a small number (about 15) had undergone malaria treatment either at the psychopathic ward of the Buffalo City Hospital or in other hospitals prior to their admission here. The number of paretics successfully treated with malaria by others in the Buffalo State Hospital district is not available to the writer at this time, and it is quite possible that this explains in part at least the 26 complete remissions in 1924-1926 as against 19 in 1932-1934.

The duration of psychosis prior to admission, if anything, seemed to be more favorable in the 1932-1934 group, as follows:

TABLE III. DURATION PRIOR TO TREATMENT

Period treated	1-3 mos.	4-6 mos.	7-9 mos.	10-12 mos.	Over 1 yr.	Unknown
1924-1926	22	10	8	15	34	11
1932-1934	29	13	9	13	24	12

As in the first series, the second series showed the greatest number of complete and partial remissions in those receiving malaria within six months after onset of psychotic symptoms. In the 1924-1926 series 14 out of 26 complete remissions and in the 1932-1934 series 11 out of 19 complete remissions occurred among those whose period of onset was six months or less.

The sex distribution was practically the same.

TABLE IV

Males

Period treated	Total No.	C. R.	P. R.	Imp.	Unimp.	Died
1924-1926	81	22	10	11	15	23
1932-1934	82	16	12	21	25	8

Females

Period treated	Total No.	C. R.	P. R.	Imp.	Unimp.	Died
1924-1926	19	4	0	3	6	6
1932-1934	18	3	1	3	6	5

The number of female patients treated is too small to permit drawing general conclusions, but the results are almost identical throughout. In the case of the males there are two outstanding differences: (1) There is a preponderance of the improved and unimproved in the 1932-1934 series as compared with the 1924-1926 series, i. e., 46 versus 26. (2) Inversely, there is a preponderance of deaths in the latter series as compared with the former, i. e., 23 versus 8. The following tables compiled from the annual reports of the Buffalo State Hospital and of the State Department of Mental Hygiene would tend to indicate that the results of treatment as shown above in the 1932-1934 group hold good for all the general paresis admissions treated with malaria and tryparsamide between July, 1928 and June, 1934, totaling some 400 cases.

TABLE V

(From Annual Reports of Buffalo State Hospital)

	First and readmissions of paretics	Census June 30		Died, year ending June 30
		On parole	In hospital	
1923	54	..	..	54
1924	84	111 including paroles	..	53
1925	69	108 including paroles	..	63
1926	87	20	92	57
1927	64	30	82	40
1928	81	29	103	38
1929	80	34	111	34
1930	61	36	119	21
1931	84	37	135	24
1932	74	22	154	34
1933	64	27	172	18
1934	78	31	185	20

TABLE VI

(From Annual Reports, Department of Mental Hygiene)

Discharges of paretics from Buffalo State Hospital

	Recovered	Improved and much improved
1923	0	6
1924	0	6
1925	0	3
1926	0	22
1927	0	18
1928	0	21
1929	0	24
1930	0	31
1931	7	20
1932	13	18
1933	6	11
1934	8	18

SUMMARY AND CONCLUSIONS

A study was made of the results obtained in a group of 100 paretics who were given malaria with no subsequent anti-luetic treatment. Similarly another group of 100 paretics were investigated, whose malaria treatment was followed up with one or more courses of tryparsamide. In each instance the figures were compiled after the lapse of the same time intervals, i. e., the oldest case two years and nine months and the most recent nine months, from beginning of treatment.

It would appear from the above study that: (1) As far as complete and partial remissions are concerned, the tryparsamide follow-up with but one or two courses has no advantage over the malaria without tryparsamide. In fact, malaria alone shows up more advantageously; (2) More than twice as many died in the group whose malaria was not followed up by tryparsamide as in the group who received tryparsamide; (3) The first group resulted in a total of 35 patients improved and unimproved, whereas in the second group (tryparsamide treated) this figure was 55; (4) Of these 55, four are discharged from the hospital, four are home on parole and 47 are still in the hospital; (5) Analyzing the figures more minutely, the 11 patients who received three complete courses

of tryparsamide fared much better than those who received one or two courses. In this particular group there were three complete remissions, three partial remissions, two improved, one unimproved and two died. On a percentage basis the comparative results would be as follows:

TABLE VII

	Complete remission, per cent	Partial remission, per cent	Improved, per cent	Unimproved per cent	Died, per cent
No tryparsamide	26	10	14	21	29
3 courses tryparsamide	27	27	18	9	18

Superficially it would seem from the evidence as it exists at present that following up malaria with but one or two courses of tryparsamide is quite inadequate. A decided gain is made when the tryparsamide treatment is extended to three courses. It is entirely possible that reinforcing malaria with a minimum of, say, 30 or 40 injections of tryparsamide will bring about much more favorable results.

REPORT OF CASES OF GENERAL PARESIS TREATED BY MODERN METHODS

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This report covers all cases of general paresis treated with malaria on the male division of the Manhattan State Hospital from January 1, 1929, up to December 12, 1934. It also includes the mention of a few cases, whose treatment was begun earlier and who are still in the hospital.

As a routine treatment, we inoculated the patients with malaria parasites, infecting them with benign-tertian-malaria. This was usually followed preferably by 12 injections of tryparsamide, three grams each, or in case of contraindication by 12 injections of neosalvarsan, 0.45 grams each and 20 injections of bismuth (bismogenol 2 cc. each injection). Contraindications to malaria treatment are poor physical condition of patient such as marked cardiovascular disturbance, renal insufficiency, as repeatedly described in the literature, also advanced age. Colored patients who show typical negroid features to a marked extent, have a racial tolerance to malaria and for this reason we did not apply this treatment to them. We inoculated by drawing blood from a patient who was running a clinical course of malaria, and then injecting into the vein of the patient to receive treatment.

From January 1, 1929, till December 31, 1933, 363 patients were treated.

1) No. of patients—363

Clinical reaction type:

Simple dementing type	215
Manic type	46
Depressive type	22
Agitated type	57
Schizophrenic type	23

2) Average age at onset of symptoms in relation to the clinical outcome

Remissions	39 years
Improved	42 years
Unimproved	40½ years
Died	43 years

3) Race distribution

Armenian	6	Irish	45
Colored	21	Italian	115
Dutch	1	Mixed	32
English	6	Scandinavian	2
Finnish	1	Slavonic	12
French	1	Spanish	5
German	56		
Greek	11	Total	363
Hebrew	49		

4) Duration of symptoms before treatment in relation to clinical outcome.

	Remission	Improved	Unimproved	Died
1 to 3 month	22	31	27	7
3 to 6 months	19	36	31	6
6 months to 1 year	19	32	33	4
1 year and over	10	31	46	9
	70	130	137	26

5) Results of treatment in relation to clinical reaction types.

		S. D.	Manic	Agitated Dep.	Schiz.
Remission	70 or 19 %	33	22	10	4	1
Improved	130 or 36 %	69	12	25	11	13
Unimproved	137 or 37½%	102	7	16	5	7
Died	26 or 7½%	11	5	6	2	2
	363 or 100 %	215	46	57	22	23

The present status of this group of patients is as follows:

Remain in the hospital	35
Transferred to other State hospitals	160
Discharged	39
Paroled	74
Returned after less than six months	12
Returned within one year	4
Died, but not during, or within three months after the malaria treatment	19

Out of the 70 patients who showed a remission, 15 (or 22 per cent) went in a state of remission following malaria treatment, 28 (or 40 per cent) within six months, 23 (or 33 per cent) between six months and one year and only 4 (or 5 per cent) after more than one year. The improved rate was somewhat different. Out of 130 cases, 70 (or 54 per cent) showed improvement immediately after treatment, 31 (or 24 per cent) within six months, 16 (or 12 per cent) between six months and one year, and 13 (or 10 per cent) after more than one year.

Since January 17, 1934, our patients have been inoculated by the direct method. The technique was published in the American Journal of Hygiene in January, 1933, by Drs. Mark F. Boyd and Warren K. Stratman-Thomas. This treatment was carried out in collaboration with the Rockefeller Foundation for Research in Malaria, which in 1931 established a station in Tallahassee, Florida. Dr. M. F. Boyd was appointed the director of that station. Among several studies, the work in paresis became the most important problem. Dr. Stratman-Thomas had charge of this work, and relations with the Florida State Hospital at Chattahoochee were established. From May, 1931, till December, 1934, about 200 patients were treated with malaria by direct inoculation. In order to carry out this work, it was necessary to find a location where anopheline mosquitoes, uninfected with malaria, could be found, but as you cannot always find the anopheline mosquitoes, it was necessary to establish a self-perpetuating colony in an insectory. This was done at Tallahassee. In May, 1933, the insectory was started at the Rockefeller Institute, York Avenue and 66th Street, New York City, with all the facilities of the Rockefeller institution at the disposal and also to include malaria studies on monkeys. Dr. Boyd made arrangements with the Manhattan State Hospital through the late superintendent, Dr. I. J. Furman, to use some of our patients for their study and in September or October, 1933, the same arrangements were made by Dr. Boyd with the present superintendent, Dr. W. E. Merriman. In the fall of 1933, Mr. Cain, entomologist of the Rockefeller Institute, made a survey of Ward's Island in order to determine the presence or absence of anopheline mosquitoes. No malaria-carrying mosquitoes were found on the island. On January 17, 1934, Dr. Thomas began to inoculate by the direct method.

Method of Securing Anopheline Mosquitoes Infected with Benign-Tertian-Malaria and Inoculation of Patients

The first infected mosquitoes were brought to New York from Tallahassee. These mosquitoes had been infected with a strain of benign-tertian-malaria, which had been used at the Florida State Hospital since 1931.

Anopheline mosquitoes are reared in an insectory, which is built in a special air-conditioned and temperature-controlled room at the Rockefeller Institute. In order to have a supply of mosquitoes infected with benign-tertian-malaria, the mosquitoes taken from the insectory are applied to a patient experiencing clinical attack of benign-tertian-malaria when this patient shows gametocytes in the peripheral blood. After the mosquitoes have fed, they are taken to the laboratory and those mosquitoes which have taken the blood meal are separated from those which have not fed; the latter are destroyed. The mosquitoes which have actually fed on the patients are placed in a cool incubator at a temperature of about 70° F, and are allowed to incubate their malarial infection for about two weeks to 17 days. At the end of this period dissection of the salivary glands will show that the sporozoites of the malarial parasites and the mosquitoes are now ready to be applied to new patients to infect them with benign-tertian-malaria. When mosquitoes are applied to a patient to inoculate the patient with malaria, each mosquito used is put in a separate cage. The cages are applied and the mosquitoes are observed to see if they actually take up the blood meal. The presence of red blood in the abdomen of the mosquito is evidence that it has fed. The mosquitoes are taken to the laboratory after they have fed, and the salivary glands dissected out and examined for the presence of the sporozoites of the malaria parasite. When sporozoites are observed, it is a certain indication that the patient has been actually bitten by infected anopheline mosquitoes, and unless the patient already has a latent malarial infection or racial tolerance, it is quite certain that the patient will develop verified clinical malaria after an incubation of approximately two weeks.

We usually do not interfere with the course of the clinical malaria unless the patient shows definite signs of weakness and danger to his life. Some of the patients had between 20 and 30 paroxysms. In some cases we had a spontaneous termination of the course. The treatment is carried out under my supervision. Dr. Thomas visits the hospital daily during the clinical course and takes blood smears and hemoglobins in order to follow the course of the malaria. The presence of gametocytes in the blood indicates that new mosquitoes

can be fed on the patient. The hemoglobin test is a general indication of how the patient is getting along. The patients are usually running daily fevers. Elevation of the fever varies but we noticed that it is rather high, higher than the average fever of the blood inoculation method.

From January 17, 1934, till December 12, 1934, 27 patients were treated by the direct inoculation method, with the following results:

1) No of patients—27

Clinical reaction type:

Simple dementing type	16
Manic type	4
Depressive type	1
Agitated type	4
Schizophrenic type	2

2) Age at onset of symptoms in relation to the clinical outcome.

Remission	39 years
Improved	39½ years
Unimproved	42½ years
Died	37 years

3) Race distribution:

Armenian	1	Italian	8
Colored	2	Mixed	2
Dutch	1	Scotch	1
German	3	Slavonic	3
Hebrew	3		—
Irish	3		27

4) Duration of symptoms before treatment in relation to clinical outcome.

	Remission	Improved	Unimproved	Died
1 to 3 months	4	4	1	..
3 to 6 months	1	4	1	1
6 months to 1 year	2	1	3	..
1 year and over	..	3	2	..
	7	12	7	1

5) Results of treatment in relation to clinical reaction types.

		S. D.	Manic	Agitated	Dep.	Schiz.
Remission	7 or 26 %	5	1	..	1	..
Improved	12 or 44½%	8	1	1	..	2
Unimproved	7 or 26 %	2	2	3	..	..
Died	1 or 3½%	1	..	..	..	..
	27 or 100 %	16	4	4	1	2

The present status of this group of patients is as follows:

Remain in the hospital	11
Transferred to other State hospitals	5
Deported	1
Left the hospital (7 on parole, 3 discharged as voluntary cases)	10
Parole patients returned after six and seven months. (One died shortly after his return.)	2

In our groups of the indirectly inoculated cases the results are somewhat less favorable than reports from other investigators. This can be explained by the fact that the material of the Manhattan State Hospital is, from the point of view of effective treatment, a bad one. It is surprising in how far advanced stages most of the paretics are admitted; the duration of the psychoses in some cases could be traced back many years. We also must call attention to the fact that often complicating factors are present, such as arteriosclerosis and alcoholism—complications that we think are to a certain extent neglected in evaluating the outcome of the treatment. Where these factors are present, the outcome is decidedly less favorable.

After introducing the malaria treatment, it was very soon observed, that the prognosis depended not only upon the mental picture but to no lesser degree upon the serological findings. We naturally devoted our attention to that fact. We often found that there was a discrepancy between the clinical outcome and the serology. We must remark here that unfortunately we are unable to follow the serologies of the parole cases after discharge, so we can only state that we often observed immediately or up to about three months after treatment a very good clinical remission with slightly improved serological findings, and vice versa. Some change in the serology after a fever treatment is present in nearly all cases; the cell count is reduced, the globulin content is diminished, the gold curves are flatter and the Wassermann in blood and spinal fluid is less positive. In favorable cases the more benign serological picture is retained or the serology becomes negative, while in unfavorable cases, even if they have shown a remission in the serological findings, the serology later becomes again markedly positive.

About 50 patients, who did not improve after receiving the routine malaria treatment followed by a course of tryparsamide injec-

tions, were treated after about three months had elapsed with another course of tryparsamide. We did not see favorable results from this additional treatment. The unimproved cases remained unchanged and we can draw the conclusion, at least upon our material, that further anti-syphilitic treatments are unsuccessful, when the patients do not show improvement about three months after completing the malaria cure with one course of tryparsamide. We had the same impression in several cases of general paresis where malaria treatment was repeated after more than six months had elapsed, because no improvement was noted.

As you saw, we employed two different techniques in the inoculation of malaria. The number of cases where the direct method was employed is not so great that we can draw comparative conclusions. It is claimed by the propagators of the direct method, that the technique has certain advantages. There is no foreign or infected blood injected into the patient, the number of takes is in white patients, who did not have malaria, 100 per cent and we do not have to worry about keeping the strain. But we feel that it has disadvantages too, which are maintenance of an expensive apparatus for the mosquitoes, a longer period of incubation (about two weeks against one week) and a more complicated process of the inoculation. The number of paroxysms in the directly inoculated cases was usually much greater than in the other cases. The immediate outcome seems to be somewhat better than in the indirectly inoculated cases with a smaller number of paroxysms. But we think that the number of the paroxysms was not responsible for the better outcome, rather a more carefully selected material to endure more paroxysms. In some cases of the mosquito (directly) inoculated cases we did not follow our usual routine of chemo-therapy after malaria. In seven cases we treated with malaria alone. By comparison we had the distinct impression that in cases which also received tryparsamide the outcome was more favorable. In five cases we did not see any marked improvement after the malaria treatment. Four months after completion of the malaria treatment we started injections of tryparsamide and there was a distinct improvement noticeable, usually in the middle of the course of 12 injections. In this observation we are in agreement with many

others, who claim that the combined treatment gives more favorable results than the fever treatment alone.

We encountered great difficulties in tracing the results of the fever treatment. Only in a comparatively small percentage were we able to check up on the further course of the disease. In the metropolitan area it is difficult to follow up discharged cases on account of the very frequent migration of the population and the disinterest of the patients and their relatives to communicate with the hospital after discharge. We were able to check upon only 18 cases, who received treatment as far back as 1928. They seemed to be getting along well, look well physically and mentally are still in a state of remission or improved.

As to the habitus of the patients, no measurements were taken, only the impression the patients made. We naturally know that this is not an adequate method to decide the habitus, but we have the impression that the asthenic type prevails among our cases of paresis. For instance, from 27 recently treated cases, 15 showed definite signs of general asthenia, five had a pycnic, two an athletic habitus and five were questionable.

It is of interest to mention that the schizophrenic type of general paresis has a less favorable prognosis than the other types. The most favorable group is a manic-expansive type, followed by the agitated, depressed and simple types. We see in the simple types often, that the remission is not a very deep one but still they are able after the treatment to live outside of the hospital, and they adapt themselves on a lower mental level in the community. This is generally impossible in the schizophrenic type, because the outstanding feature is that they retain their hallucinations and delusions with paranoid content.

We are able to confirm the opinion that in many cases, even where the malaria treatment is unable to influence the psychosis as such, it conserves physically the individual and prolongs his life. We see many treated cases of general paresis who are unable to leave the hospital because their mentality is greatly impaired or not sufficiently improved that they could care for themselves in the community. We still have patients in the hospital, who were treated as far back as 1924, who are able to carry on physically, but unable to leave the hospital.

This group consists of 15 cases. Two cases started the treatment in 1924, two in 1925, two in 1926, four in 1927 and five in 1928. Of this number 12 are working in various industries, three are up and about but too deteriorated to be occupied. The group is distributed into the following clinical reaction types:

Simple dementing type	7
Depressive type	1
Agitated type	2
Schizophrenic type	5
	15

It is interesting to note that five patients of this group, who show a schizoid type of reaction, were paroled one or more times and had to be returned chiefly on account of their trend reaction. This confirms our observation in the main group.

The number of our cases is small in comparison with large statistics from hospitals here and abroad, and as we mentioned we were handicapped in tracing our cases on account of numerous transfers to other State hospitals. Nevertheless we are able to show, that the introduction of the malaria treatment is of great benefit as a therapeutic procedure. Our statistics show that the combination of the malaria with tryparsamide, or neosalvarsan increases the beneficial results. We cannot give exact figures on how many treated cases remained in a state of remission, how many remained improved, unimproved and how many died. In our survey of the material, two important facts should be mentioned. First, we cannot emphasize too strongly the importance in treating general paretics in the early stage of the disease and second, unfortunately the cases we receive at the Manhattan State Hospital are mostly in far advanced stages. This is amazing, because we receive our patients mostly from the metropolitan area, where medical resources are easily accessible and where the enlightenment of the population on the subject of syphilis is most intensive. We believe that the mental hygiene movement should help a great deal in disseminating more knowledge to bring about early detection of cases of neurosyphilis in order to bring to them the benefit of the treatment at a time when the disease is not yet advanced and therefore the outcome more favorable.

MODIFIED SEDATION WITH SECONDARY BUTYL-ETHYL BARBITURIC ACID IN THE PSYCHOSIS

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Since the work of Wright[1] in 1926 on sodium bromide therapy in the psychoses, this form of therapy has been carried out in the Marcy State Hospital. For the past four years sodium barbital and sodium amytal have been used in the treatment of excited, agitated and depressed patients. In some cases improvement was noted, in others the benefit obtained consisted of a temporary sedative effect, which resulted in a partially improved behavior which made their care easier; a number of cases continued to be a problem. Out of this group ten were selected for observation under more intensive sedation. Three were in an excited state, showed impulsive behavior, homicidal and suicidal tendencies; three were in a depressed state and four were agitated and depressed. The duration of the psychoses prior to this treatment varied from seven months to seven years; ages ranged from 21 to 60 and the individual weights varied from 78 to 140 pounds. Seven were losing in weight due to unwillingness to take food, insomnia, restlessness and over-activity. As stated, none had responded well to previous treatment with sodium barbital.

The drug used for intensive sedation was secondary butyl-ethyl barbituric acid, a disubstituted barbituric acid which is reported by Shonle, Keltch and Swanson[2] as less toxic than iso-amyl-ethyl barbituric acid and as effective in smaller doses. It is soluble in water and is easily administered by mouth.

Method and dosage: The course of treatment was arbitrarily set for an eight-day period. The drug was made up in 5-grain powders which were dissolved in water at the time of administration and given by mouth. An initial dose of 10 grains was given at 8:00 p. m., and additional doses of 5 grains each were given whenever the patient showed signs of arousing, so that the patient was kept asleep for a period of 36 hours. The sleep was then interrupted by discontinuing the drug for a period of 12 hours, when the patient remained in bed and received liquid nourishment every hour. At 8:00 p. m. on the 3rd, 5th and 7th days, this procedure

was repeated. In this way the patient was awake every other day for nourishment, thus preventing dehydration and decreasing the possibility of an accumulative toxic effect.

Observations during course: During the entire course of treatment the sleep was similar to a natural sleep, and pulse, respirations and temperature remained within normal limits in all cases but one. The patients moved their arms and legs about and assumed various natural positions. Bowels and kidneys continued active except in one case that required a cathartic and an enema. Some of the patients were incontinent but several awakened and cooperated for necessary nursing care and attention. During the day when receiving no drug, all but one remained quietly in bed, were relaxed and dozed at intervals. No definite toxic effect was noted throughout except in the case of one who had a heart attack which may or may not have been due to the treatment, as she had shown signs of chronic myocarditis prior to this time. The treatment in this case was discontinued on the fourth day because of her increasing pallor and weakness of the pulse; edema, cardiac irregularity in rate and rhythm were not found. Two patients complained of dizziness and one had some nausea for a short period.

The total dosage ranged from 20 to 60 grains in one period of 36 hours and no tolerance for the drug was noted during the eight-day period. The maximum amount of drug for the period was 215 grains in an excited case and the minimum was 105 grains in a depressed case. The depressed patients averaged 120 grains, the agitated and depressed 130 grains, and the excited cases 165 grains.

Observation three months after course: Following this treatment all patients received from 10 to 40 grains of sodium barbital daily, after an interval of 1, 2 and 3 days in 9 cases, and 12 days in 1 case. The more undernourished received special high caloric diet, tonics, cod liver oil and tomato juice, as indicated. All patients except the one whose treatment was discontinued showed increase in weight, ranging from 2 to 16 pounds, in a period of three months. Several that had required tube feeding ate voluntarily immediately after treatment. Four patients showed some improvement in behavior and were somewhat more cooperative and tidier in their habits. The excited cases showed the most improvement. One improved to the extent that she was transferred

from the disturbed ward; the other two, who had shown marked suicidal and homicidal tendencies, no longer required special nursing attention. Only one depressed patient showed a slight improvement in behavior and no improvement was noted in the agitated and depressed cases. In no case was there any improvement in trend or a change in emotional display that could be attributed to this treatment.

Observations one year after treatment: The four patients who showed an initial improvement in behavior displayed no further improvement during this period. Three others showed improvement as follows: One was transferred to a more comfortable ward, one was home on parole, and one was ready for parole. These three patients were diagnosed as manic-depressive psychosis. Three cases showed no improvement in behavior.

Discussion: It is always difficult to evaluate the factors which are influential in modifying psychotic behavior as so many diverse factors are present in every case. In this series of ten cases various forms of treatment were carried out both before and after sedation with secondary butyl-ethyl barbituric acid. As far as can be determined the following might be attributed to this particular treatment:

1. Cases 1, 2, 3, 7 showed some improvement in behavior facilitating their care.

2. Cases 1, 2, 4, 6, 7, 8 and 9 showed an appreciable increase in weight following treatment.

Conclusions

1. Secondary butyl-ethyl barbituric acid may be used for the production of prolonged sleep without toxic effect in cases having no cardiac or kidney lesions.

2. During the eight-day period tolerance for the drug did not appear.

3. In the ten cases in which this drug was used the effect obtained did not indicate that it was of particular value in altering the trend or behavior of psychotic patients.

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BOOK REVIEWS

A History of Magic and Experimental Science. Vols. III and IV. Fourteenth and Fifteenth Centuries. By LYNN THORNDIKE. Columbia University Press. New York. 1934.

So rapid and overwhelming has been the advance of science in the past half century, that in the mere effort to assimilate the newer data and theories there has been a tendency to lose sight of the historical backgrounds of modern science. Interest in the history of science has been growing, however, in recent years, as attested by the efforts of such men as Dr. George Sarton in his editorship of *Isis*. Such development, largely in the field of physical science, has been paralleled by an interest in the history of medicine, and the importance of such a cultural acquisition has been emphasized by the creation of institutes of medical history in leading European and American universities.

Professor Thorndike of Columbia University has long applied himself to the study of the precursors of modern science. His earlier volumes dealing with the history of science through the thirteenth century are authoritative. In the present volumes he continues the history through the succeeding two centuries, and considers in great detail the pseudo-sciences of alchemy and astrology, and the place of magic in the early practice of medicine. These volumes should therefore be of marked interest and value to the psychiatrist, since, as is well-known, nineteenth century psychiatry had to emancipate itself from beliefs with respect to witchcraft, demonology and possession. All those sound reasons justifying the acquisition of a good historical understanding, in general, are valid in supporting the claims of historical instruction as a background for medical specialization.

The publication of these monumental volumes was made possible through a subsidy by the Carnegie Corporation of New York through the History of Science Society. This is a substantial recognition of the value of Professor Thorndike's researches, which reflect honor upon American scholarship.

Child Psychiatry. By LEO KANNER, M. D. Charles C. Thomas Co. Springfield, Illinois, and Baltimore, Maryland. 527 pages. Price $6.00.

Here is a real contribution not only to the field of psychiatry but also to pediatrics and general medicine. Dr. Kanner presents a clear, concise exposition of child psychiatry in all of its phases. In writing this book, the

author set for himself the goal of presenting to his readers the various personality disorders of children on a "broad objective, unbiased and practical basis." This goal he attains. He removes the veil of mysticism which in the past has entangled and shrouded children's personality problems. He makes the issue, and correctly so, that child psychiatry is not the ward of the psychiatrist alone but that it needs to be an intimate branch of pediatrics, that the ultimate solution to the now present disorder encountered in child psychiatry will come with the advent of the "psychiatric pediatrician" or the "pediatric psychiatrist".

The book is divided into two parts with prefaces by Dr. Adolf Meyer and Dr. Edwards A. Park, of Johns Hopkins University. In part one the author sets forth the basic principles of child psychiatry, reviewing the current schools and trends in psychiatry. He takes issue with the incomplete methods employed by many members of these schools in their study and treatment of personality problems of children. Dr. Kanner stresses here, as he does throughout his book, the fact that child psychology is an "objective and concrete study of the mentally integrated individual during the natural progress of maturation" and that psychobiology is a "pluralistic" and "genetic-dynamic" science. He describes the factors to be considered in the study of the problem child in order to arrive at a correct diagnosis. The therapeutic considerations in developing a suitable treatment plan after a diagnosis has been made are discussed.

The second part, consisting of three sections, deals first with the personality difficulties which are encountered as aftermaths of physical illness. Here are included the anergastic and dysergastic reaction forms. At the close of this section is a brief discussion of the endocrinopathies. In section II the many personality disorders which originate in functional disorders limited to a specific organ or organ system are described. Each of the body systems is discussed in this relationship of functional to personality disorder. Section III is devoted to the discussion of those personality difficulties which express themselves as whole dysfunctions of the individual.

Throughout the text, Dr. Kanner has injected in a liberal manner short sketches and brief summaries of actual cases treated by him and others. These he utilizes to illustrate and emphasize the principles and facts he desires to establish.

Dr. Kanner's book is recommended as an excellent text and guide to the medical student, the general practitioner, the pediatrician and the psychiatrist.

Psychopathology—A Survey of Modern Approaches. J. Ernest Nicole. Second Edition. Wm. Wood and Co., Baltimore, 1934.

This book does not lend itself to much condensation in a review as it is itself, a survey of various concepts, psychopathological and otherwise, of psychiatric disorders. The book is well written in a discursive style and contains an extensive bibliography. Every psychiatrist should find it a valuable addition to his library as a reference book for frequent use. It should also be of service to students and general practitioners, as it is especially free from terminological confusions.

The book is much more than a summary of various systems of psychopathology. Following a brief discussion of the evolution of the concept of psychopathology the author proceeds, under chapter headings, to discuss the concepts and theories of Morton Prince, Freud, Adler, Jung, Rivers, Watson and Kempf.

Although Adolf Meyer's views are referred to here and there in the text, there is no attempt to describe Meyer's concept of psychobiology. This, we believe, is an unfortunate omission.

Why a whole chapter is devoted to Berman's endocrine theories is hard to understand as these have little or no scientific value.

Trotter's "herd instinct" is well discussed in Section III of the appendix. In the opinion of the reviewer, this is as it should be, as Trotter's theories have not been sufficiently emphasized in clinical psychiatry.

It was not clear to the reviewer why the author saw fit to put the discussion of the ego, id, and superego and Jung's introvert-extravert personality concepts in sections I and II, respectively, of the appendix, rather than including them in the chapters devoted to the theories of the Freudian and Jungian schools of thought.

It is particularly gratifying to find chapters devoted to biochemical and physiological approaches, Kretschmer's studies of physique and character, and a discussion of ethnological and sociological forces.

The author, in chapters XV and XVI, discusses the application of psychopathology in general to the fields of general medicine, education, industry, child guidance and the whole field of social pathology.

In conclusion the reviewer feels that the author has done a real service by condensing the whole field of psychopathology in a readable volume of some 280 pages so that "he that runs may read."

Principles of Adolescent Psychology. By EDMUND S. CONKLIN, Indiana University. Henry Holt & Co. New York. Cloth. Price $3.00. 1935. Pp. 437.

This book is the result of the author's long experience as an educator and as an advisor of students. Its subject matter is based on the literature, his experience as a teacher and contact with hundreds of adolescents who have consulted him regarding their personal problems. The book is designed to give reliable information concerning the period of adolescence to students, teachers, ministers, parents and physicians. The author emphasizes the fact that adolescent problems are but phases in the growth of the personality, or distortions of such growth, as youth presses forward in a progressive integration of the many behavior patterns contributing to the personality as a whole.

The author mentions the difficulty in defining what is meant by the term "adolescence" and deems it best to concentrate upon the nature of adolescent behavior rather than be too anxious as to the sharp delimitation of its range in the life cycle. He remarks that adolescence is so weighted with problems and possibilities as to make it a most critical period of growth.

Being a teacher of psychology, the author very naturally mentions again and again the efforts to measure by means of tests the various phases of human behavior which have been performed by numerous psychologists. Psychologists as a group tend to study human beings *en masse*. Psychiatrists, on the other hand, emphasize the necessity of studying the individual; from the standpoint of his physique and intellectual, emotional and social development, plus his developmental history and the result of his life's experiences. The author very wisely states that not single factors, but many factors usually enter into aberrant adolescent behavior, and that one must seek its roots in the earlier developmental history of the adolescent.

Little is said about emotional desires and urges, although Adler's "will to power" concept is frequently mentioned, but then psychologists do not place the same emphasis on emotional desires as do psychiatrists. Psychoanalytic concepts are mentioned in their proper place.

Chapters are devoted to such subjects as physical maturation and its effects; sex differences; interests of adolescence; ideals; factors in social adjustment; effects of social conflict; influence of the family; romantic love; religious adjustment. The last three treat misdemeanors and delinquency, special delinquent problems and abnormalities of personality organization and adjustment.

The book will be of value to the student and layman who is interested in the adolescent phase of the individual's development. It is furnished with an extensive bibliography in the form of footnotes.

The Family. By JOSEPH KIRK FOLSOM. John Wiley & Sons. Inc., New York. 1934. 604 pages. Price $4.00.

Professor Folsom of Vassar College has studied the family as a dynamic unit in an attempt to integrate a number of approaches toward the problem: the anthropolgical, psychological, historical, economic, sociological and psychiatric. Recognizing that family life has been one of continuous social change, he has outlined its cultural history and geography, comparing and contrasting various family patterns in different countries and levels of civilizations and defining certain basic tendencies and phenomena. He has indicated the effect of mechanical invention and biological and psychological discovery on individuals within the family, showing the range of variation and the processes of change. The change in women's labor, both in and out of the home, the individuation of personality and life patterns occupy an important place in the study.

Much thought has been given by the author to the problems of marriage and divorce. He sees the function of the family as the satisfaction of individual needs, providing pleasure and minimizing suffering. Conceding that some of these needs might be met by other institutions, it is his opinion that the satisfaction of the wish for response or love could not be achieved by any substitute institution.

To the many problems arising in the family situation, he offers three possible solutions: Expert investigation and guidance of possible candidates for marriage, courses of instruction for adolescents and more humane and honest divorce. It is understood, however, that these suggestions could have but little value unless the individuals within the family set-up have not only insight but empathy, together with similar attitudes and valuations.

The author of this book feels that the future development will be away from emphasis on the reproductive and economic factors, to emphasis on the love factors within the situation. A knowledge of home economics, adequate sex education and instruction and practice in the art of getting along will all be of great value. Probably the most important attitude to be developed in the family set-up is one of objectivity, avoiding blame or judgment of one's partner. This, Folsom calls an intellectual approach. One wonders if this might not be more adequately described as an emotional acceptance.

The author quotes from many recent studies. There is a wealth of reference material and an adequate index, both by name and subject. An appendix gives a general bibliography and suggested research projects, together with more recent developments in the field.

Teachers and supervisors of social case workers will appreciate greater understanding of complex family problems, made possible by the author's efforts, and the study will be of value as a reference book to all individuals interested in the trends and future development of society. "Our scientific knowledge of the family can at least guide the individual if not guide society and reduce individual suffering attending social change." In this book there has been made a definite contribution to our knowledge of the family.

Personality Adjustment and Domestic Discord. By HARRIET R. MOWRER. American Book Company, New York. 1935. 290 pages. Price $2.25.

This book, presented as a volume in "The American Sociology Series," is based on the author's personal contact with cases of domestic discord which she has studied and treated in her capacity as domestic discord consultant of the Jewish Social Service Bureau of Chicago. In her analysis of the factors involved in each case, a background of knowledge in social and racial customs, the sociology of interaction and dynamic psychology with its mental mechanisms is used. Accordingly each domestic situation is studied as that of two individuals, possessing certain personalities because of their early conditioning, who have failed to adjust to married life. This reduction of the problem of domestic unhappiness to its fundamental essentials is noteworthy and is significant in that it heralds the study of maladjustment in marital life with the same approach as is now used in individual maladjustment by mental hygiene and in childhood development by child guidance and progressive education.

An interesting feature of the work is its revelation of the deplorably inadequate personalities which our present social mores are developing and thrusting into marriage and parenthood. In the words of Kimball Young, who contributes the editor's introduction, "the reading of the cases in this volume makes one aware of the lack of socially accepted and intelligent patterns of culture which would prepare our boys and girls and young men and women for a more adequate and happier marriage and family life."

The body of the book consists of case reports illustrative of the patterns and conflicts found in domestic discord. These reports are unusual since they are told in the first person and in nearly the exact words of the client; also because the many rationalizations each has made concerning his or her own situation are clearly indicated. At the beginning, the author describes in detail her interview technique—the personal conscious interview method. At the end she outlines the general approach in the social treatment of each type of case, which aims at creating in the individual a partial insight into

his own personality difficulties and those of his partner as they pertain to the particular situation or difficulty. A study of these methods on the part of social workers engaged in family work is to be recommended because of the approach, the attitudes and precautions which the author has found helpful to the success of her endeavors. Unfortunately, to succeed, this method of study and treatment requires a highly trained individual who has at hand the necessary time to devote to each case—with the author, four hours for the initial interview with each party to the conflict. The average present-day worker can almost be heard sighing "I wish I could give them that much time and still cover my cases."

The book is a distinct contribution to the developing study of the family, is well rounded in its study and dynamic in its approach. It can be perused with benefit by all students of sociology and social work as well as those individuals interested in the factors involved in that ever-present and important institution—the family.

Constructive Eugenics and Rational Marriage. By MORRIS SIEGEL, M. D. McClelland & Stewart, Limited, Toronto, 1934. 196 pages.

Eugenics is, fundamentally, the application of the principles of biological inheritance to the improvement of the human race. No eugenist denies that environment is a factor in the development of an individual's capacities. The author asserts, however, that inheritance is vastly more important than environment. No one need accept either the biological or environmental point of view *in toto*. Whether one believes that biological influences are the determinants, or whether one believes that they are only contributory factors, in either case it would appear desirable to know something about inheritance, and how to apply this knowledge practically. Consequently any book that makes such knowledge available should serve a useful purpose. There are many excellent texts on eugenics, but the author of this book and the two writers of forewords seem to think that they are too "high-brow." The present book attempts to reach a broader public. The emphasis of the book is upon more rational marriage, and if it encourages men and women to exercise more thought and discrimination in the choice of spouses, it will serve a very important purpose.

It is to be regretted, however, that in attempting to appeal to a non-scholarly audience the author has seen fit to introduce many statements which are either at variance with known facts, or highly doubtful. For example, it is stated that morons propogate at least twice as fast as the normal population (page 55). "The feebleminded is responsible for more

crime degeneracy and pauperism than any other single group." (55) "Data from the world over indicate that epilepsy is on the increase." (58) "About 60 per cent of inmates of jails are habitual criminals." (60) "Most authorities on eugenics believe that unless we succeed in putting a stop to the ever-increasing incidence of feeblemindedness and insanity there will be about 60 per cent of the population degenerate within the next 75 years." (107) These quotations may be multiplied, but this is not necessary in order to show that the work is very uneven in quality, and that in attempting to reach too large a public, the author has lowered the standards of scientific presentation.

Commonsense for Mothers. By MRS. JOHN S. REILLY. The Funk & Wagnalls Company, New York and London. 1934. 390 pages. $2.00

This book carries out the promise of the title. It is a volume of good, sound advice based on the author's expereince with her own seven children. The problems of child rearing and training, from birth through adolescence, are discussed in an unusually practical way. Mrs. Reilly realizes that the average mother needs to be told how to carry out many of the procedures of child care and guidance as well as what these procedures are and why they should be undertaken. Detailed directions are given for teaching an infant to drink from a cup, for providing occupation for a convalescent child, for preventing the older children from becoming jealous of the new baby. Helpful suggestions are provided for the layette, for labor-saving methods for the overworked mother and housekeeper.

It is a comprehensive book covering every phase of the child's development. In addition to being a sort of laboratory manual for parents, the book is valuable because it exerts a wholesome influence, impressing upon the reader the author's cheerful philosophy. Mrs. Reilly regards child rearing as a satisfying career and a joyous experience. She emphasizes the rewards of motherhood, and the importance of the mother to the family and the home, in a bracing way, calculated to inspire. While the difficulties of child training are treated in a serious way, it is shown that a sense of humor is of aid in meeting them. To the over-anxious mother this book should be most reassuring.

The style is breezy, colloquial and full of humor. In an informal way, as if including the reader in the discussion, the author offers her advice so tactfully that antagonism is not aroused. The autobiographical tone makes the book more interesting and more convincing.

Sex and Temperament. By MARGARET MEAD. William Morrow & Company. New York. 1935. 335 pages.

Individuals differ from each other physically, intellectually and temperamentally. Social theories concerning the relations of men no longer deny this self-evident fact. The causes of these differences are still a matter of dispute, however, and there is a strong tendency, deriving from biological science, to emphasize hereditary as against environmental influence. By easy transference, the significance of heredity in relation to individual differences has been attached to group differences, and it is argued, for example, that if two nationalities differ with respect to musical ability and appreciation, this must be due to the inherent superiority of one group with respect to such qualities.

Most American anthropoligsts, however, reject this view, and seek, instead, to explain such differences in terms of the cultural environments of the two groups. Assuming equivalent native abilities they attempt to show that culture determines the channels in which group interests develop.

The present book deals with temperamental differences with respect to sex. Are such differences as aggressiveness, for example, inherent in the fact of sex or are they the consequences of the modes of behavior impressed by society upon males and females? The unraveling of the factors in a complicated society such as our own is an almost impossible task. But in simpler societies the forces at work are easier to group and comprehend. The author had already established a reputation for her skill in studying the native populations of the Pacific, and in this book, following the same general method, she analyzed problems of sex and temperament as she observed them in the daily lives of three native tribes in New Guinea.

As the result of her intensive investigations she came to the conclusion that temperament is not a consequence of sex, but of culture. "The material," she says, "suggests that we may say that many, if not all, of the personality traits which we have called masculine or feminine are as lightly linked to sex as are the clothing, the manners, and the form of head-dress that a society at a given period assigns to either sex. Only to the impact of the whole of the integrated culture upon the growing child can we lay the formation of the contrasting types. There is no explanation of race, or diet, or selection that can be adduced to explain them. We are forced to conclude that human nature is almost unbelievably malleable, responding accurately and contrastingly to contrasting cultural conditions. The differences between individuals who are members of different cultures, like the differences btwn individuals within a culture, are almost entirely to be laid to differences in conditioning, especially during early

childhood, and the form of this conditioning is culturally determined." (281).

The preceding quotation represents the heart of the book. It is followed by very close reasoning to account for the origin of the socially standardized differences. The book should be of great significance to readers of the PSYCHIATRIC QUARTERLY, for precisely as modern schools of psychiatric thought have traced the relations between social forces and types of individual behavior, so does Miss Mead trace the actions and reactions of sexually aberrant individuals and the societies in which they live. She shows how society seizes upon differences and molds them in accordance with set types. Many readers will undoubtedly dispute the validity of Miss Mead's thesis as a complete and categorical answer to the question of temperamental sex differences, but nobody can deny the force of her data and arguments, nor the rationality of her interpretations. If the limits of human variation are as wide as they seem to be, and if individuals are so pliant, there is hope for the socialized production of many useful types of both men and women.

Sex in Prison. By JOSEPH FISHMAN, Former Inspector of Federal Prisons. National Library Press, New York, 256 pages. Price $3.00.

This book discusses the sex life of not only those convicted to prison, but also of those detained awaiting trial. The author has been asked frequently "What do prisoners do about sex?" In answering, he points out that of 63,000 male prisoners committed to state and federal penitentiaries in a typical year, 37,000, or 58 per cent, were 34 years or younger; further, that 27,000, or 42 per cent were 24 years or younger. Regarding women, of 3,000 committed, 60 per cent were 34 years or younger. Thus, these prisoners are committed to prison during the period of their most intense virility.

The author states that in most prisons, particularly in the county institutions, there is an insufficient amount of work, hence little opportunity for sublimation. Homosexuals are prosecuted vigorously in many states, and as a result a large number find their way into the prisons. This problem of sex perversion in the institutions, Fishman says, is enormous, for, with limited channels of sublimation the prisoner must choose between suppression and some form of perverted sex practice to gratify this impulse.

In "co-ed" institutions, the task of preventing intimacy is a difficult one, especially in the smaller places where no matron is employed. The author discusses the deceit and trickery to which prisoners will resort to gain con-

tact with prisoners of the other sex, even to the extent of jeopardizing their parole.

The book describes as especially vexatious the problem of homosexuality, claiming that this offers as much difficulty as do heterosexual relationships. A large number of young prisoners enter the institutions each year and they become prey for the active homosexuals. Existing crowded conditions play an important part in complicating the task of preventing this, and idleness and loneliness give an impetus to the growth of homosexuality.

In order to correct this situation, the author suggests that the known homosexuals should be absolutely segregated from the others. He confesses, however, that contemporary prison construction blocks thorough execution of such a plan in most of the institutions. Overcrowding necessitates "celling" two or more prisoners together. However, Fishman insists that acts of perversion, when discovered, should be treated with tolerance, the known homosexuals segregated and the recently initiated reprimanded or given change of work or accommodations. Special attempts should likewise be made to detect the chronic "wolves," who frequently force others to submit to their advances under dire threats.

A particularly unsavory condition is shown in a recent survey in Chicago, revealing that about 50 per cent of those in jail were awaiting trial and were never convicted, many eventually released after weeks or months in jail. The author points to the plight of such prisoners, who, having fallen under the evil influences already described find that they have no redress after their release.

To further remedy these unfortunate circumstances, it is urged that adequate occupational therapy, suitable recreation and organized exercise be instituted. Home visits for selected married prisoners and even for some unmarried prisoners, tending to keep the prisoner's family together, are suggested. These occasional visits might also save the prisoner from becoming a temporary or permanent homosexual and might help to preserve the personality.

This account of the sex problem in prisons should be given due consideration. It is based upon the author's personal experience as an examiner in the department of justice, as an inspector of prisons and as deputy commissioner in the department of correction of New York City. Fishman cites a few case histories and quotes from numerous authorities. In view of his appreciation of the differences between our social life, economic system, attitudes, ethics and education, and those of other countries, this author's request that his recommendations be considered would seem to merit attention.

The Social Survey of Merseyside. Vol. III. Edited by D. Caradog Jones, with the assistance of J. E. McCrindell, H. J. H. Parker, C. T. Saunders. University Press of Liverpool. Hodder and Stoughton, Ltd. London. 1934. 560 pages.

Since the appearance of Charles Booth's classic *Life and Labour of the People of London*, the survey has been an important instrument in preparing the way for social progress. The survey not only presents a more adequate description of the way in which the mass of people live, but when ably directed it furnishes the driving force for improvement. The present survey deals with a section of England known as Merseyside, which consists primarily of Liverpool and the environing sections. This area represents one of the most congested in England, and the problems presented are typical of highly industrialized communities.

The results of the survey are included in three volumes. The first, or introductory volume described the history and development of the Merseyside area, and studied the population according to age, sex and marital condition. The discussion bore primarily on overcrowding and poverty as they affect the home and the family. Volume II was a detailed presentation of facts relating to the industries of Merseyside, the economic factor being stressed because of the fundamental importance of unemployment in the causation of poverty.

The preceding volumes are of significance to all intelligent students of society. Volume III, has additional interest to investigators of problems of physical and mental disorders, and hence is of importance to readers of the PSYCHIATRIC QUARTERLY. The survey sets forth facts concerning the origin and distribution in the Merseyside area of the deaf and dumb, the mentally deficient and epileptic, and the physically defective. Consideration is also given to the destitute, alcoholic, immoral and criminal classes. The facts with respect to the feebleminded will be of especial interest, as painstaking comparisons are afforded between the feebleminded and the general population with respect to birth rates, size of families, the incidence of feeblemindedness within the families containing at least one defective number, etc. It is also shown that defective individuals have a tendency towards the heaping up of defects—that is, within physically and mentally defective groups, the defects do not appear in an isolated manner. In accordance, too, with the current sociological approach, it is shown that defectives tend to segregate themselves within certain districts.

Bearing in mind that it is the nature of a survey to be general rather than specific, it is still evident that the present study has much material that should prove of value to an understanding of the distribution of mental and physical defects, and of their relation to the standards of living of a community.

New Minds for Old. by Esmé Wingfield-Startford, D. Sc., M. A. The Macmillan Company, New York. 1935. 452 pages. $3.00.

As a masterpiece of English literature with beautiful similes and forceful metaphors in abundance one can recommend this volume quite highly. The author manifestly is a scholar and a writer far above the average, but one wishes that he might devote his activities to subjects less specialized than mind-training.

We feel his pessimistic note regarding the future of civilization, which is struck in the opening chapter, has no real basis in fact and bespeaks a lack of knowledge of the world rather deplorable for one who attempts to convert our C^3 minds into A^1 mental machines.

The statement "The very notion that improved machines demand improved men seems to have occurred to no one," indicates the author is not aware that for more than two decades the mental hygiene movement has concerned itself with considerable success with just this matter.

Much good advice, unfortunately in the form of platitudes, may be found in the pages of the book but it lacks force because it is not followed by scientific proof and there is too much an air of introspective or arm-chair psychology about the whole treatise to prove at all effective or convincing to scientifically-minded men.

Although the relationship of mind and body is well outlined in the third chapter entitled "In Corpore Sano," its significance is later nullified when a discussion of extroversion and introversion is undertaken.

Such a decisive and final statement as: "It is the standpoint of mind-training that every man is the artist of his own temperament, and that just how much he turns his mind outward or inward is for him to decide," makes short work of such findings as were reported after painstaking research by men of the calibre of Kretschmer, Cannon, Stockard and others who would disagree.

The fourth book of the volume concerns itself chiefly with a scathing criticism of Freudian psychology, yet at times the author accepts without question portions of the Freudian hypothesis and actually applies psychoanalytical principles to fortify his own points—therein indicating a lack of consistency, so necessary in one who attempts to fill a gap in practical psychology which after all, in our opinion, exists only in the mind of the author.

We regret to be obliged to report that in our opinion the book fails to accomplish the purpose for which it was intended and fortifies our conviction that psychologists without a medical background find it difficult to see man as an integrated whole and an intricate psychobiological unity.

Developmental Psychology. By F. L. GOODENOUGH. Appleton-Century, New York. 1934. Pp. xvii + 619.

Dr. Florence Goodenough is a professor at the Institute of Child Welfare of the University of Minnesota. She is a leader in experimental research in child development in America, has published many papers on various specialized aspects in this field and has issued several volumes on child study and emotionality of children. Certainly, any systematic presentation which this author may make in this field should receive careful attention.

In general, psychiatrists have been impressed by the possibilities of dynamic or developmental psychology. There has been a growing interest in the study of child behavior as it is related to the personality of the adult. More and more space is devoted in the psychiatric literature to the study of the behavior child, early child development in its relation to adult behavior and prepsychotic personalities.

The present volume is unique in its viewpoint and system of organization. What we have here is really an elementary psychology such as one might use in a beginning course in collegiate instruction. In place of the conventional text which devotes several chapters to the nature of protoplasm, the nervous system, the anatomy of the brain, sensations, images and feelings before taking up subject matter which is of direct and immediate interest to the student of human nature. Dr. Goodenough gives an exposition of the development of the body and of the mental life of the human being. Psychology is defined as the study of human development, and it is pointed out that organized knowledge which pretends to any scientific validity must make use of the experimental method, and goes on to show how experimentation has been and can be applied to the developing human organism. After three chapters, which are introductory and set forth the general scheme that is basic for her organization of the material, she devotes the next eight chapters to a systematic description of the growth and mental development of the child from conception through infancy. Seven chapters follow on the general development of the school child; two chapters are devoted to adolescence and one to behavior at the college level. We have then practically four-fifths of this book taking as its subject matter the study of the physical and mental development of the infant, child and youth. This is really a radical departure from the conventional presentation of knowledge concerning the subject matter called psychology. The material of this first part of the book is excellently organized and presented and eminently readable.

The last five chapters of the book deal with adult behavior and abilities, with mental disease, old age, and lastly with general adjustment of the individual to his environment. These chapters are not nearly so satisfactory as those of the first portion of the book. The chapter on mental disease is par-

ticularly unsatisfactory. It is too sketchy to develop any viewpoint thoroughly or to correlate the facts of psychopathology with those of systematic developmental psychology.

To sum up, we have in this volume on developmental psychology a well-balanced, readable, educative and entertaining presentation of much of the newer experimental knowledge concerning human behavior and mental life. No one truly interested in psychology, either normal or abnormal, can fail to benefit by going over Dr. Goodenough's presentation in detail. It is to be regretted that the chapter on "Mental Disease" was not done with the same degree of care which the rest of the volume shows.

The Patient and the Weather. By WILLIAM F. PETERSEN, M. D., with the assistance of Margaret E. Milliken, S. M. Edwards Brothers, Inc., Ann Arbor, Michigan. Vol. II. 530 pages. Volume III. 375 pages. Profusely illustrated.

Volume II discusses general considerations relating to the effects of meteorological conditions on patients with various types of disease. Volume I, soon to be published, deals with the response of the normal individual to the meteorological environment. These volumes record a large number of clinical histories together with detailed observations of the reactions of patients in various types of weather. Demographic studies are also set forth to show the effects of meteorological conditions on the prevalence of disease, both physical and mental.

Volume III has to do with mental and nervous disease. In chapter III, the author discusses "The Focal Reaction in the Psychosis," and gives an interesting resumé of studies dealing with seasonal variations in mental disease. Less convincing are the conclusions drawn from studies of geographic distribution of malformations, mental defects and functional psychoses. Adequate consideration does not seem to be given to the many factors other than the weather which were in part responsible for the divergent rates in various parts of the country. How well the proofs set forth in this volume meet the requirements is left to the reader to determine.

Standard Classified Nomenclature of Disease. Compiled by the National Conference on Nomenclature of Disease. Edited by H. B. Logie, M. D., C. M. New York. The Commonwealth Fund. 1935. Second edition.

In the issue of the PSYCHIATRIC QUARTERLY for January, 1933, attention was called to the desirability of a uniform and logical classification of diseases, and of the successful manner in which this was met by the Standard Classified Nomenclature of Disease, edited by Dr. H. B. Logie. Two years after its appearance a new edition was found desirable. During the interval the classification has been used in almost 500 hospitals in the United

States and Canada. It is being used in hospitals affiliated with some of the leading schools of medicine in the country. In addition, 27 national organizations have approved the classification.

The same broad system of classifying disease by the organ affected and by the cause is continued in the revised edition. Profiting, however, from the experience of the hospitals, and from suggestions offered by representatives of important medical groups, some of the sections have been rewritten and additions have been made. The most important changes have been made in the sections on endocrinology, neurology, diseases of the cardiovascular system, and diseases of the musculo-skeletal system.

The reasons for preparing such a standardized classification were valid in the first instance, and continue to be so in the new edition.

The following books also were received:

Elements of Statistics. By HAROLD T. DAVIS and W. F. C. NELSON. The Principia Press, Inc., Bloomington, Indiana. 1935. 428 pages.

Intended primarily for economists, the illustrative examples being drawn from the field of political economy. The methods, however, are applicable to the problems of the psychiatrist, inasmuch as the mathematical terminology is not too involved, and there are excellent discussions, among others, of curve fitting and correlation.

Current Legal Thought. A publication, devoting its October, 1935, number exclusively to medical jurisprudence. Published at 245 Broadway, New York.

This special number is a survey in abstract form of the more important contributions to this essential discipline during the past two years. It comprises (1) the law covering doctors and the practice of medicine, (2) the branches of the medical sciences essential to law administration and the fundamental legal concepts applied to the medical sciences in their utilization by law. The sources from which these abstracts are taken are authentic works, periodical and textual, of the first order in the fields of law and medicine.

Outlook Upon the Future of British Unemployed, Mental Patients and Others. By NATHAN ISRAELI, Ph. D. Science Press Printing Co., Lancaster, Pennsylvania. 1935. Paper. 30 pages.

This forms part of an experimental study carried out in Great Britain under a fellowship of the Social Science Research Council. The nature of the study and its purpose are best explained by quoting the author's summary at the end of Chapter I. He says, "It is felt that a closer study of the relation between the mental patterns of the unemployed and those of downcast mental patients should throw light on the mental mechanisms of psy-

choices and on the nature of the differences between normal and abnormal reactions and attitudes, and would be of scientific as well as of practical importance."

Motion Pictures in Education in the United States. By CLINE M. KOON, Senior Specialist in Radio and Visual Education, U. S. Department of the Interior. The University of Chicago Press, Chicago. 1934. Paper. Price $1.00.

Compiled at the request of the director of the International Education Cinematographic Institute, it is intended for the use of governmental, educational and motion picture agencies which are seeking sources of information regarding motion pictures in relation to education. It lists the sources where motion picture material may be obtained for teaching health and hygiene, history, international relations, and the sciences. The State laws governing motion pictures occupy a chapter It is a book that should prove of value in the reference departments of various types of libraries.

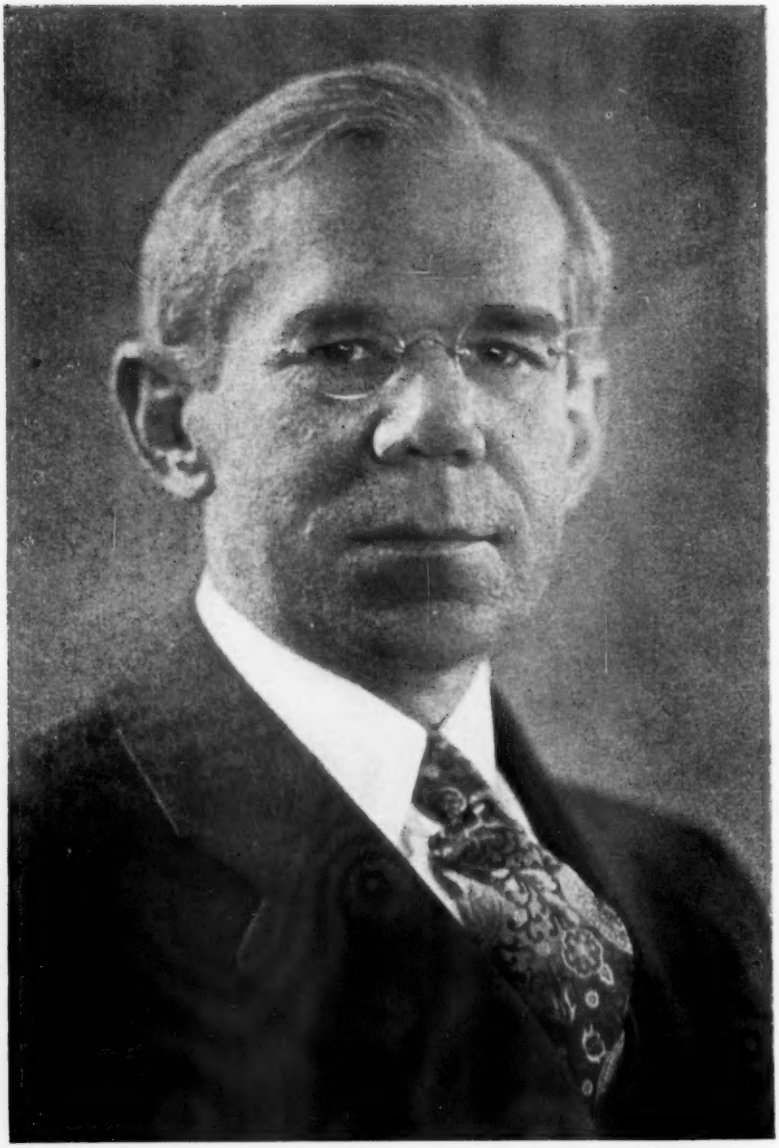
Outline of Town and City Planning. By THOMAS ADAMS, D. Eng. Foreword by Franklin D. Roosevelt. Russell Sage Foundation. New York. 1935. 368 pages. 125 illustrations.

The author is one of the leading city planners of the world, and is now special lecturer on city planning in the Massachusetts Institute of Technology and associate professor in the School of City Planning of Harvard University. There is a brief history of city planning from ancient times down to the present day, and problems pertinent to mental hygiene, such as growth of population, recreation and sanitation are treated adequately. The author sums up by saying, "In its truest form, the art of city building is the art of creating the kind of environment needed to produce and maintain human values." There can be no doubt that a poorly planned city with crowded, unsanitary and noisy districts, is clearly unfavorable from the standpoint of mental hygiene.

Modern Motherhood. By CLAUDE EDWARD HEATON, M. D. Farrar and Rinehart, New York. 287 pages. $2.00.

The subtitle is "A Book of Information on Complete Maternity Care; Prenatal—Delivery—Aftercare." Quoting from the preface, "An attempt is made in this book to give a frank presentation of our present knowledge of childbirth to lay readers, particularly expectant parents." It is the author's purpose to tell prospective parents about good obstetrical care and how to obtain it.

Appended is a bibliography which includes 28 titles recommended to expectant parents for further reading as well as the source material upon which the book is based.



GEORGE HUGHES KIRBY
1875-1935

GEORGE HUGHES KIRBY

In the death of George Kirby an outstanding figure in psychiatry has been removed. His loss is mourned not only in the Department of Mental Hygiene, which claimed him for its own, but wherever the influence of American psychiatry prevails. In his professional outlook his was a combination of traits at once progressive and conservative. While he welcomed innovations and encouraged investigations, he weighed the evidence with judicial fairness as to what was worthy to be accepted. Never once did he ally himself with a cult or movement which later proved to be unsound. His genial companionship will be missed in psychiatric gatherings where he was by common consent accepted as a leader.

When his health became impaired several years ago and he was obliged to relinquish his official duties as director of the Psychiatric Institute and Hospital, he was still comparatively young and at the height of his professional career. Perhaps the intensity of his application to the innumerable details incident to planning and organizing the Institute had a part in aggravating the cardio-vascular disorder which incapacitated him about that time and resulted in his death on August 11, 1935.

On the occasion of the formal dedication of the Institute in December, 1929, his friends were pained to observe the evidence of serious illness, which was all too apparent. His courage and fortitude in fulfilling the duties of presiding officer at the opening session were commented upon with admiration by those who would have counseled him to spare himself the effort.

It must have been a source of gratification and pride for him to witness and direct the activities of the new Institute for more than two years and that when they had to be relinquished it was to his former assistant and staunch friend. The new Institute was his cherished dream and will be his fitting monument.

NOTES

Dr. Horatio M. Pollock, who has ably and successfully directed the publication of the QUARTERLY as its editor since 1915, relinquished his duties in that position upon the completion of the July number. By appointment of Commissioner Parsons, Dr. Richard H. Hutchings and Dr. Clarence O. Cheney were designated to be editor and associate editor.

It is understood that Dr. Pollock's wish to be relieved of his duties was prompted by his occupation with an important literary project, the completion of which will require more time for research and composition than he has found possible to devote to it.

—The Frances School for Retarded Children, located at Pittsford, Monroe County, New York, which has been operated for several years past under a license issued by the New York State Department of Mental Hygiene, was permanently closed October 1, 1935.

—Miss Hester B. Crutcher, who had been director of psychiatric social work in the New York State Department of Mental Hygiene since January 1, 1931, was given a leave of absence on October 1, 1935, to accept the position of director of the division of delinquency in the Federal Children's Bureau in Washington, D. C.

—The Foster Home, a private institution for the care and training of mental defectives, was licensed by the Department of Mental Hygiene, on September 12, 1935. The new institution, which is located on Atlantic Avenue, Garden City, Long Island, has accommodations for six patients. Its proprietor and director is Mrs. Marie J. Fontis.

—The American Public Health Association will hold its annual meeting October 7-10, at Milwaukee. Concurrent with this, there will be a health education institute, October 6-10. Up to this year there has been no section on mental hygiene, but the secretary of the association announces that at this annual meeting an entire special session will be held on mental hygiene and the subject will be discussed from the viewpoint of the health officer, the school physician, the public health nurse, the psychiatrist and the United States Public Health Service.

—Dr. Albert Pfeiffer, for the past 11 years director of the division of social hygiene, State Department of Health, died at Albany on September 24. After earning degrees in London at the Royal College of Surgeons, he pur-

sued the special field of epidemiology, becoming chief of the division of venereal diseases in the Massachusetts Health Department, which position he held until his association with the New York State Department of Health, in 1924. His researches in syphilology were extensive and an article of his appeared in the April, 1935, issue of the PSYCHIATRIC QUARTERLY.

—The eighth annual meeting of the Oneida County Mental Hygiene Committee was scheduled for October 1. Dr. C. M. Hincks, director of the United States and Canada Committee for Mental Hygiene, is to address the meeting. The executive group for the ensuing year comprises: Professor Milledge L. Bonham, Jr., chairman; Dr. Robert Sloan, vice-chairman; Miss Mary Evans, second vice-chairman; Eva M. Schied, R. N., secretary; Miss Ida M. Henry, treasurer, and the Hon. Curtis F. Alliaume, Drs. Richard H. Hutchings, Charles Bernstein and William W. Wright.

—The Psychiatric Institute and Hospital announces graduate courses in neurology and psychiatry for this year. The trimester in neurology and psychiatry begins September 30 and ends December 6. The semester in neuropathology begins January 20 and ends May 8. These courses, given in cooperation with Columbia University College of Physicians and Surgeons, draw clinical material from the Institute, the Vanderbilt Clinic, the Montefiore Hospital, and the Neurological Institute of New York. They are designed for graduate medical students interested in many aspects of neurology and psychiatry, and in addition to the clinical survey they aim to cover, in part, the sociological and educational fields.

—The New York State Conference on Social Work will be held in Buffalo, October 22-25, with headquarters at the Statler Hotel. Thirteen institutes are listed in the preliminary program, to cover phases of case work, technique of interviewing, child placing, administration of public welfare, problems of emergency and old age relief, and other topics. Complete details may be obtained from the secretary of the conference, Mrs. Mary B. Holsinger, Drawer 17, State Office Building, Albany.

The Probation Officers' Conference will meet on the Monday and Tuesday preceding the Conference on Social Work, also in Buffalo. On Wednesday the two conferences will meet in joint session. For further information, those interested may write to the State Division of Probation, State Office Building, Albany.

—The second session of the Letchworth Village Summer School for the Study of Mental Deficiency was held from July 1 to August 10. Morning sessions were devoted to clinical demonstrations and to personal case studies,

afternoon sessions to lectures. Twenty-one visiting lecturers contributed generously to the program, their special fields including: Auxology, biological chemistry, eugenics, genetics, endocrinology, ethnology, neuropathology, phylogenesis, physiology, psychiatry, psychology and sociology.

The course lasted six weeks, with review and case reports being presented in the last week. Round table discussions in auxology and psychiatry were held and four trips were made to institutions engaged in diverse fields of research. There were 21 students, representing 16 universities or other institutions and including medical undergraduates or graduates and graduate students in psychology.

The Summer School was organized to promote a closer relationship of the field of mental deficiency to the clinical, educational and research interests of modern medicine, and to recognize the study of mental deficiency as an approach to an enlargening concept of the organism as a whole. Its aims, as set forth more specifically in the announcement, are: (1) to stimulate more widespread interest in the problems of mental deficiency, (2) to encourage medical students and graduates in the study of the many ramifications of the subject and to afford training towards clinical and research studies for qualified non-medical graduate students, and (3) to correlate the problems of mental deficiency with recent advances in allied biological and sociological sciences.

INDEX TO VOLUME IX

PAGE

Acidophilus milk therapy 20

Adolescent psychology (*rev.*) 657

American Association on Mental Deficiency, annual meeting, 327 516

American Orthopsychiatric Association, annual meeting, 177 320

American Psychiatric Association, annual meeting, 328 514

American Public Health Association, annual meeting 672

Association for Research in Nervous and Mental Diseases, meeting 179

Attorney's textbook of medicine (*rev.*) 149

Bartlett, Dr. Marion R., paper on "The Sensory Acuity of Psychopathic Individuals" 422

Basal metabolism in manic-depressive psychoses 586

Battey, Dr. Percy B., death of 178

Battle Creek Sanitarium establishes institute for mental hygiene 326

Behavior, studies in the dynamics of (*rev.*) 146

Bellinger, Dr. Clarence H., promoted to superintendent of Brooklyn State Hospital 511

Berman, Dr. Harold H., paper on "Treatment of Psychoneurosis in State Hospitals" 105

Big problems on little shoulders (*rev.*) 165

Blalock, Dr. Joseph R., paper on "Treatment of General Paresis with Combined Electropyrexia and Tryparsamide" 631

Blood-cerebrospinal barrier, the 48

Boekman, Dr. Katherine G., paper on "Care of Disturbed Female Patients" 412

Bower, Dr. George C., paper on "The Sedimentation Test in Psychotic Patients with Pulmonary Tuberculosis" 263

Brain stem, rupture of the, in cases of traumatic sudden death 271

Burn, Dr. Casper G., identifies germ of meningo-encephalitis 326

PAGE

Cancer report of 1934 519
Cerebrum, human, intercortical systems of the (*rev.*) 491
Cheney, Dr. Clarence O., elected president of the American Psychiatric Association, 515; paper on "Research and Teaching Activities of the Psychiatric Institute", 5; paper on "Clinical Data on General Paresis", 467; appointed associate editor of PSYCHIATRIC QUARTERLY 672
Child, the, his origin, development and care (*rev.*), 167; guidance in schools, 436; new horizons for the (*rev.*), 495; psychiatry (*rev.*), 654; psychology (*rev.*), 488; spastic, the (*rev.*) 149
Children, prematurely born, physical and mental growth of (*rev.*), 304; school, mental hygiene needs of, 525; if I have (*rev*) 317
Children's unit of Rockland State Hospital, new 326
China, medicine man in (*rev.*) 151
Chinese medicine (*rev.*) 160
Citizenship, the doctor and (*rev.*) 318
Clérambault, Dr. G. de, death of 519
Combes', Dr., Sanitarium, discontinued 327
Craig, Dr. Maurice, death of 327
Creedmoor State Hospital, a separate institution 512
Crime, a doctor studies (*rev.*), 318; law and social science (*rev.*) 300

Davis, John Eisele, paper on "Practicable Objections of Physical Education in the Treatment of the Mentally Ill" 237
Dawes, Dr. Spencer L., retirement of 325
Delinquent women, five hundred (*rev.*) 152
Dementia præcox, hereditary and environmental factors in the causation of, 129, 287; hematoporphyrin treatment in 368
Dennes, Dr. Blanche, paper on "Hematoporphyrin Treatment of Dementia Præcox and Involution Melancholia" 368
Derby, Dr. Irving M., paper on "Life Expectancy in General Paresis" 458
DeSanctis, Dr. S., death of 518
Determinants of favorable results in psychiatric patients 392
Dietitian, hospital, professional training of (*rev.*) 172
Discharge from hospital, what happens to patients after 95
Disturbed female patients, care of 412

PAGE

Doctor and citizenship (*rev*), 505; in history (*rev.*), 318; studies crime (*rev.*) 318
Doll, Dr. Edgar, elected president of the American Association on Mental Deficiency 516

Elliott, Dr. Robert M., retirement of 173
Environment, personality and (*rev.*) 308
Environmental and hereditary factors in the causation of dementia præcox and manic-depressive psychoses, 129 287
Epilepties, federal census bureau report on (*rev.*) 519
Eugenics, applied (*rev*), 499; constructive, and rational marriage (*rev.*) 660

Faith, a common (*rev.*) 156
Falkirk-in-the-Ramapos, formerly "Dr. MacDonald's House" 177
Family, the (*rev.*), 658; care of mental defectives 349
Father, paroled, in mother's allowance home 610
Favorable results in psychiatric patients, some determinants of 392
Federal census bureau report on mental defectives and epilepties (*rev.*), 519; on mental disease in the United States (*rev.*) 328
Female patients, disturbed, care of 412
Fisher, Dr. Edward D., death of 177
Five hundred delinquent women (*rev.*) 152
Frances School, closed 672
Fuller, Dr. Raymond G., paper on "What Happens to the Mental Patient After Discharge from the Hospital?", 95; paper on "Hereditary and Environmental Factors in the Causation of Dementia Præcox and Manic-Depressive Psychoses", 129 287

General paresis, clinical data on, 467; life expectancy in, 458; treatment of comparative results, 636; treatment with combined electropyrexia and tryparsamide, 631; by modern methods, 642; trends in the outcome of 194
Greenwich Village, 1920-1930 (*rev.*) 509
Gronlund, Dr. Anna A., paper on "Modified Sedation with Secondary Butyl-Ethyl Barbituric Acid in the Psychosis" 651

PAGE
Happy journeys to yesterday (*rev.*) 498
Hematoporphyrin treatment in dementia præcox and involution melancholia 368
Hereditary and environmental factors in the causation of dementia præcox and manic-depressive psychoses, 129 287
Hildreth, Harold M., paper on "Survey of the Mental Hygiene Needs of 250 School Children" 525
Hinsie, Dr. Leland E., paper on "Determinants of Adequate Psychotherapy in a Public Mental Hospital", 212; paper on "Treatment of General Paresis with Combined Electropyrexia and Tryparsamide" 631
History, psychology and culture (*rev.*) 162
Hoch, Dr. Paul, paper on "Treatment of Schizophrenia with Prolonged Narcosis" 386
Hoehman, Dr. Charles H., paper on "Rupture of the Brain Stem in Cases of Traumatic Sudden Death" 271
Huddart, Viola, paper on "Hematoporphyrin Treatment in Dementia Præcox and Involution Melancholia" 368
Human nature and management (*rev.*) 145
Hutchings, Dr. Richard H., appointed editor of PSYCHIATRIC QUARTERLY 672
Hydrotherapy in the treatment of the mentally ill 570

If I have children (*rev.*) 317
Individual, social plight of the (*rev.*) 497
Intercortical systems of the human cerebrum (*rev.*) 491
Intercurrent somatic disease, effect on manic-depressive reactions 88
Interhospital conference at Psychiatric Institute 327
International Congress on Mental Hygiene, second 329
International Journal of Individual Psychology, available in English 326
International Neurological Congress in London 329
Interviewing in social work (*rev.*) 506
Involution melancholia, hematoporphyrin treatment in 368

Kirby, Dr. George Hughes, tribute to the late 671
Kopeloff, Dr. Nicholas, paper on "Acidophilus Milk Therapy" 20

PAGE

Kramer, Dr. Frank M., paper on "The Rupture of the Brain Stem in Cases of Traumatic Sudden Death" 271

Kuh, Dr. Sydney, death of 178

Kusch, Dr. Ernest, paper on "Report of Cases of General Paresis Treated by Modern Methods" 642

L'Amour et la haine (*rev*) 157

Law, theft and society (*rev.*) 503

Legal thought, current (*rev.*) 669

Letchworth Village, one-year residencies in mental deficiency, 328; second session of summer school 518

Levin, Dr. H. L., paper on "Treatment of General Paresis—Comparative Results" 636

Little, Dr. Charles S., twenty-fifth anniversary as superintendent of Letchworth Village 518

Malzberg, Benjamin, paper on "Hereditary and Environmental Factors in the Causation of Dementia Præcox and Manic-Depressive Psychoses", 129, 287; paper on "Race and Mental Disease in New York State", 538; paper on "The Prevalence of Mental Disease Among the Urban and Rural Populations of New York State".. 55

Management, human nature and (*rev.*) 145

Manic-depressive psychoses, hereditary and environmental factors in the causation of, 129, 287; basal metabolism in the 586

Masserman, Dr. Jules H., paper on "The Blood-Cerebrospinal Fluid Barrier" 58

McKendree, Dr. Oswald J., paper on "Some Determinants of Favorable Results in Psychiatric Patients" 392

Medical psychology, a textbook of (*rev.*) 297

Medicine, attorney's handbook of (*rev.*), 160; man in China (*rev*).. 151

Mental defect (*rev.*) 144

Mental defectives, family care of, 349; federal census report on (*rev.*), 519; clinical work in State schools for 27

Mental deficiency, concept of the theory and practice of, 232; nursing (*rev.*) 306

Mental disease, race and, in New York State, 538; report on, in United States (*rev.*) 328

PAGE

Mental disorder, the problem of (*rev.*) 499
Mental health, towards (*rev.*) 307
Mental hygiene, and the public health nurse (*rev.*), 501; for effective living (*rev.*), 153; needs of 250 school children 525
Mental training—a practical psychology (*rev.*) 500
Milici, Dr. Pompeo, paper on "A Psychic Defense Against Reality" .. 617
Mills, Harriet May, death of 513
Morgan, Andrew D., death of 177
Motherhood, modern (*rev.*) 670
Mother's encyclopedia, the (*rev.*) 158
Motion pictures in education in the United States (*rev.*) 670

National Committee for Mental Hygiene, study of school teachers, 177; twenty-fifth anniversary of the 179
Neurological Institute, twenty-fifth anniversary of the 179
Neurology (*rev.*), 307; and psychiatry, 1933 yearbook of (*rev.*) 508
Noetzel, Elinor S., paper on "The Mental Hygiene Needs of 250 School Children" 525
Noise, the problem of (*rev.*) 486
Nomenclature of disease, standard classified (*rev.*) 668
Notkin, Dr. J., paper on "Hematoporphyrin Treatment in Dementia Præcox and Involution Melancholia" 368

Occupational therapists, chief, eleventh annual institute for 321
Occupational therapy, the application of, in the treatment of mental illnesses 400
O'Donnell, Dr. Leo P., paper entitled "Prevision of the Development of the New Children's Unit of Rockland State Hospital" 426
Oneida County Mental Hygiene Committee, eighth annual meeting .. 673
Outlook of future upon British unemployed, mental patients and others (*rev.*) 669

Palombo, Dr. Albert S., paper on "Physiotherapy and Hydrotherapy in the Treatment of Mental Diseases" 570
Parental attitudes as observed in a child guidance clinic 279
Paroled father, in the mother's allowance home 610

PAGE

Parsons, Dr. Frederick W., reappointed commissioner of mental hygiene 178

Pfeiffer, Dr. Albert, death of, 672; paper on "The Medical Aspects in the Prevention and Management of Late and Latent Syphilis" 189

Physical education in treatment of the mentally ill 237

Physiotherapy and hydrotherapy in treatment of mental diseases... 570

Pilcher, Dr. Lewis S., death of 178

Planning, outline of town and city (*rev.*) 670

Pollock, Dr. Horatio M., retires as editor of PSYCHIATRIC QUARTERLY, 672; paper on "Hereditary and Environmental Factors in the Causation of Dementia Præcox and Manic-Depressive Psychoses", 129 287

Pooler, Dr. Harold A., paper on "The Application of Occupational Therapy in the Treatment of Mental Illnesses" 400

Population, dynamics of (*rev.*) 315

Potter, Dr. Howard W., paper on "Clinical Work in the State Schools for Mental Defectives" 127

Prematurely born children, the physical and mental growth of (*rev.*) 304

Primitive people, education of (*rev.*) 170

Probation and criminal justice (*rev.*) 311

Prolonged narcosis, treatment of schizophrenia with 386

Psychiatric Institute, research and teaching activities of the, 5; courses in neurology and psychiatry, 1935-1936 673

Psychiatry, child (*rev.*), 654; recent advances in (*rev.*) 507

Psychic defense against reality, a 617

Psychoanalysis, (*rev.*), 308 clinical outline of (*rev.*), 171; new introductory lectures on (*rev.*), 148; theories and facts of (*rev.*).... 490

Psychology, adolescent (*rev.*), 657; child (*rev.*), 499; experimental and theoretical (*rev.*), 507; for nurses, a textbook of (*rev.*), 301; general experimental (*rev.*), 302; introduction to comparative (*rev.*) 143

Psychoneurosis, treatment of, in State hospitals 105

Psychopathic individuals, sensory acuity in 422

Psychopathology, modern approaches (*rev.*), 656; outlines to general (*rev.*) 498

Psychotherapy, determinants of adequate, in a mental hospital, 212; in children 335

PAGE
Public health nurse, mental hygiene and the (*rev.*) 501
Public health nursing, the art of (*rev.*), 494; a survey of (*rev.*) 161

Race and mental disease in New York State 538
Rome State School, twentieth annual summer school 326
Rosanoff, Dr. Aaron J., paper on "Some Clinical Manifestations of Traumatic Decerebration" 116
Rosenheim, Dr. Frederick, paper on "The Paroled Father in the Mother's Allowance Home", 610; paper on "Parents' Attitudes as Observed in a Child Guidance Clinic" 279
Ross, Dr. Robert M., appointed physician-in-charge of Brigham Hall.. 177
Rush, Dr. Benjamin, physician and citizen (*rev.*) 316

Salmon, Thomas William, Memorial Lectures 327
Schein, Dr. Gabriel, paper on "The Sedimentation Test in Psychotic Patients with Pulmonary Tuberculosis" 263
Schizophrenia (*rev.*) 307
Sedation, modified, with secondary butyl-ethyl barbituric acid..... 651
Sedimentation test in psychotic patients with pulmonary tuberculosis 263
Sensory acuity of psychopathic individuals 422
Sex, and temperament (*rev.*),662; in prison (*rev.*) 663
Sing Sing doctor (*rev.*) 494
Slum and crime (*rev.*) 165
Social plight of the individual (*rev.*) 497
Social survey of Merseyside (*rev.*) 665
Social welfare, organization for (*rev.*) 155
Social work, scientific basis of (*rev.*), 504; training in psychiatric (*rev.*), 147; 1935 yearbook of (*rev.*) 502; interviewing in (*rev.*), 506; State Conference on 673
Spastic child, the (*rev.*) 149
Speilmeyer, Dr. Walther, death of 519
Standard classified nomenclature of disease (*rev.*) 668
State schools, clinical work in 27
Statistics, elements of (*rev.*) 669
Sterilization, the case for (*rev.*) 158

PAGE

Syphilis, medical aspects in the prevention and management of late and latent 185

Tallman, Dr. Frank W., paper on "Child Guidance in Schools"..... 436
Theft, law and society (*rev.*)..... 503
Towards mental health (*rev.*)..... 307
Tower, Dr. James L., resigns 518
Training youth for the new social order (*rev.*)..... 163
Traumatic decerebration, some clinical manifestations of 116
Twenty-five years after—sidelights on the mental hygiene movement (*rev.*) 496

Urban and rural populations, prevalence of mental diseases among.. 55

Vaux, Dr. Charles L., paper on "Family Care of Mental Defectives" 349

Weather, the patient and the (*rev.*)..... 668
Webster, Dr. Blakely, named superintendent of Dannemora State Hospital 326
Wechsler, David, paper on "The Concept of Mental Deficiency in Theory and Practice" 232
Western Psychiatric Hospital at Pittsburgh, new buildings..... 326
Who says old? (*rev.*) 510
Who shall survive? (*rev.*)..... 150
Wolberg, Dr. Lewis R., paper on "The Effect of Intercurrent Somatic Disease on Manic-Depressive Reactions", 88; "Basal Metabolism in the Manic-Depressive Psychoses" 586
Worcester State Hospital, interneships in psychiatry 178
Work relief in Germany (*rev.*)..... 314
Worthing, Dr. Harry J., promoted to superintendency of Willard State Hospital 175

You can master your life (*rev.*)..... 206

Zabriskie, Dr. Edwin G., elected president of the Association for Research in Nervous and Mental Diseases 179

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